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**THE**  
**GLASGOW MEDICAL JOURNAL.**



THE  
GLASGOW MEDICAL JOURNAL.

EDITED BY

JOHN LINDSAY STEVEN, M.D.,

AND

THOMAS KIRKPATRICK MONRO, M.D.,

FOR THE

Glasgow and West of Scotland Medical Association.

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JULY TO DECEMBER, 1900.

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When clear the Molendinar sang  
 Its sil'er saughs an' birks amang,  
 An' trouts they loupet a' day lang,  
                     Wi' crimson spots;  
 An' bush an' tree wi' music rang  
                     Frae feathered throats.

When Scottish firs, frae tap to tae,  
 O'erhung the stey Necrop'lis brae;  
 An' heard was by ilk friar gray,  
                     In 's midnight cell,  
 The storm amid their branches play,  
                     Baith fierce an' fell.

When owre fornent the house o' pray'r,  
 Wi' stately an' mediæval air,  
 There stood the Bishop's Castle fair,  
                     An' garden fine,  
 Whare lords an' leddies gossip'd rare,  
                     An' walked langsyne.

Here something wav'rin' boon my heid,  
 Its cloak-like wings did wide outspreed,  
 Syne zig-zag whum'l't heels owre heid,  
                     Richt owre my shouther,  
 That turned my bluid as cauld as leed,  
                     An' me a' through'ther.

I scratched my touzled tap o' tow,  
 Dichted the cauld sweat aff my brow,  
 An' leukin' roun' as weel's I dow,  
                     Beheld the wraith  
 O' whilom Maister Peter Lowe,  
                     Clad in 's last claithe.

"Ye seem to ken me, frien'," quo' he,  
 "Though how that sic a thing should be  
 Is raether mair than I can see,  
                     Since I hae lain  
 Three hun'er years but twenty-three  
                     Aneath yon stane."

Says I, as soon's I fand my breath,  
 An' 'tween my teeth had chacked an aith,  
 "Despite your weeds o' dusky death,  
                     An' voice sae howe,  
 Unless I'm drunk, or daft, or baith,  
                     Ye're Doctor Lowe,

"The founder o' our Surgeon's Ha',  
 Within whilk still leuk frae the wa'  
 Your Vandyke chaffs, adown whilk fa'  
                     Rich wavy curls,  
 Imper'l, an' moustache fu' braw  
                     Wi' wee French twirls.

"Whase life has been sae quaintly drawn  
 By Finlayson, our chief *savan'*,  
 An's warks on shelf o' leebr'y stan'  
                     In honoured place,  
 Whare's gauntlet gloves wi' pride are shawn  
                     In fine glass case."

"That ye're a son o' Æsculap.,  
 I guess frae what ye've just let drap,  
 How say ye then to tak a stap  
                     Behint some stane?  
 The snell nicht air through this thin hap  
                     Cuts to the bane!"

When we had reached whare it was lown,  
 An' on our hunkers couried down,  
 The moon's white face, now waner grown,  
                     Leuked o'er the scene;  
 While out the lift the starnies shone,  
                     Wi' fainter sheen.

"Now that we're seated, gie's your crack,"  
 The doctor op'd his mouth an' spak',  
 "Sae changed are things as I leuk back,  
                     I'm maist ay fain  
 Aboon my 'wildered heid to tak'  
                     The clods again;

"The burn, the wood, the fiel's, the flowers;  
 The palace<sup>1</sup> an' the west kirk<sup>2</sup> towers;  
 The manse,<sup>3</sup> within whase garden bowers,  
                     My love an' I  
 Ance felt the happy gloamin' hours  
                     Like minutes fly.

---

<sup>1</sup> The remains of the Bishop's Palace were removed in 1789, to make room for the Royal Infirmary, which was erected on its site.

<sup>2</sup> The western tower, together with the consistory house or library, which stood at the north and south-west corners of cathedral, were pulled down in the middle of the nineteenth century.

<sup>3</sup> Dr. Lowe was married to Helen, daughter of the Rev. David Weems, who was the first Presbyterian minister in Glasgow after the Reformation. His residence was in the Rottenrow, and in the lodging formerly occupied by the Prebendary of Carstairs.

“They a’ are mony a year since gane,  
 Their place built up wi’ lime an’ stane ;  
 The gray cathedral stan’s alane,  
                     Still to the fore,  
 By whilk I trace the past again,  
                     An’ lost restore.”

“But, doctor, losh ! that’s just the fate  
 O’ everything that’s antique,  
 E’en your ain beuks are out o’ date  
                     Ye wrote langsyne ;  
 Sae changed are a’ our views o’ late  
                     ’Boot medicine,

“That if in practice ye were back,  
 An’ just heard how the doctors spak’  
 ’Boot microbes that diseases mak’  
                     In human bodies,  
 The Faculty ye’d think clean crack,  
                     Strideleggin’ hobbies.”

“Ye’re maybe no sae far astray,  
 I didna think the Faculty  
 Partic’lar wise e’en in my day,  
                     Or extra blate ;  
 But what the deil are microbes, pray,  
                     ’Boot whilk they prate ?”

“Microbes are germs that thrive an’ breed,  
 An’ ’mang folks tissues browse an’ feed ;  
 In num’er mair than Abra’m’s seed,  
                     Or sands on shore ;  
 An’ through the worl’ diseases spread,  
                     In mony a score.

“D’ye see that biggin’, straught ower there  
 Frae whare we’re sittin’, ’cross the square,  
 A stane-throw wast the house o’ pray’r ;  
                     An’, ’boon clock-face,  
 A dome that rises in the air  
                     Wi’ meikle grace ?”

“My een are like the mole’s a wee,  
 That in the mirk aye best can see ;  
 But owre there surely used to be  
                     The palace hoose,  
 Frae whilk the Bishop ruled his see,  
                     Canty an’ croose ?”

“Ye’re richt eneugh, it’s as ye say,  
Though that’s now our Infirmary,  
Where first was taught the theory,  
That germs in air  
The ruin was o’ surgery,  
An’ chief bugbear.

“Joe Lister was the surgeon’s name,  
Wha’s noo a peer o’ worl’-wide fame;  
He said the germs they were to blame  
For’s woun’s no healin’,  
An’ fand a plan to kill the same,  
An’ stop them beilin’.

“Ye needna glow’r, it’s true eneugh  
His plan at first was crude and rough;  
For germs, like cats, are mortal tough,  
Their thread to nick;  
But Joe he mixed the rare druschoch,  
Soon did the trick.

“Carbolic acid, fine an’ nippy,  
Made down to ane or less in twenty  
O’ aqua, oil, an’ spray, an’ putty,  
Rub’d up wi’ chalk,  
Them smoor’d as in a brunstane cooty,  
As deid’s a mauk.

“The spray to sterilise the air;  
Lotion to clean an’ guard the sair;  
An’ putty, wi’ tinfoil, a square,  
Were a’ his tools;  
While for details, a patience rare,  
Ne’er gien to fools.

“Protected by this germicide,  
His knife in abscess safe did glide;  
An’ compound fractures, gapin’ wide,  
He rinsed out clean;  
The breach wi’ putty then did hide,  
Snug an’ serene.

“When twa-three days had syne come roun’,  
An’ he had lows’d the dressin’s down,  
What pus there was about the woun’  
Your e’e wad held;  
Nor fient a haet that wasna soun’  
Was to be smell’d.

" Sic were the rough an' ready ways  
 He practised in those early days ;  
 His blunders, failures, and delays,  
                     The finin' pot,  
 That error frae the truth betrays,  
                     When humbly sought.

" Still visions perfect, did this seer,  
 O' antiseptics fondly rear,  
 When operations without fear  
                     Performed wad be,  
 That ance were deemed ayont the sphere  
                     O' surgery.

" O' lives an' limbs still to the fore,  
 That ance were lopp'd aff by the score,  
 He fondly dreamt ; an' e'en before  
                     To th' east<sup>1</sup> gaed he,  
 For healthiness his ain wards bore  
                     Awa' the gree.

" Whilk made his colleagues him deride,  
 An' mak' bokeek o' 's germicide ;  
 But he his time did wisely bide,  
                     An' wrought awa ;  
 An' now his doctrines far an' wide  
                     Are praised by a'.

" For 'mang his gen'rous student youth,  
 When he gaed east, an' later south,<sup>2</sup>  
 He left disciples o' his truth,  
                     Wha didna shame,  
 By practice an' hy word o' mouth,  
                     To spread its fame.

" First, Cameron, his then house-man,  
 Wha may be said his 'prentice han'  
 To hae got tried on Joe's new plan,  
                     At 's vera birth ;  
 An' 's now a cunnin' journeyman  
                     O' meikle worth.

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<sup>1</sup> Professor Lister was appointed in 1869 to the Chair of Clinical Surgery in Edinburgh, vacated by his father-in-law, the celebrated Mr. Syme.

<sup>2</sup> Professor Lister left Edinburgh in 1877 to become Professor of Clinical Surgery in King's College Hospital, London.

" His pupil, Will. Macewen, too,  
Wha ably fills his chair e'now,  
To th' microbe doctrine's stuck like glue ;  
          An' mony mae  
Hae held the torch aloft to view,  
          E'en to this day.

" They, mair aseptic e'en than he,  
The maister's crude germ theory  
Soon brought to sic efficiency,  
          That, safe's the bank,  
Feats were performed in surgery  
          O' the first rank.

" Sic like as straughtin' boo'd leg banes,  
Removing tumours frae folk's brains,  
Whuppin' out ga' an' kidney stanes,  
          An' far waur lesions,  
Or rumblin' inside human wames,  
          To lowse adhesions.

" That's just a swatch of what's been done  
Sin' antiseptics hae come in ;  
The surgeon now thinks 't nae mair sin  
          To plunge a knife  
In thorax, brain, or abdomen,  
          Than in 's ain wife."

" Sic ferlies, guid sake ! fair cow a'  
That e'er before I heard or saw ;  
It har'ly soun's, this windy blaw,  
          Like barber skill,  
Whilk in my day kent nocht ava,  
          But how to kill.

" But, gracious me ! your story, frien',  
Has my auld pate bumbaz'd as clean  
As I 'd been mortal fu' yest're'en ;  
          This Lister chiel  
Maun surely hae colleaguin' been  
          Wi' the black deil.

" Yet if the half ye tell be true  
About this germicidal brew,  
Then after a' there's something new  
          Aneath the sun ;  
Had Solomon the microbes knew  
          He'd changed his tune."

“ But mair’s to tell—this theory,  
 First born in the Infirmary,  
 Has e’en had the monopoly  
                     O’ medicine  
 As meikle’s darin’ surgery,  
                     Amaist sin’ syne.

“ The wee germs modes o’ life an’ ways—  
 Microbes they’re a’ ca’d nowadays—  
 Ance wrapp’d in a mysterious haze,  
                     An’ vague surmise,  
 Hae been shawn up in every phase,  
                     An’ queerest guise.

“ Partic’larly their fell relation  
 To ilk disease’s curs’d causation,  
 Has wrought a perfect transformation  
                     In theory  
 An’ practice baith o’ the physician  
                     O’ th’ present day.

“ Observers swear they’re far mair plenty  
 Than bugs, an’ fleas, an’ sic like gentry ;  
 O’ every shape they can content ye,  
                     Be’t rod or crank,  
 Drum-stick, or dot, or tirlie-wirlie,  
                     Or liuk or shank.

“ There’s ane they say to ilk disease,  
 That in the bluid sets up a bleeze—  
 Consumption, typhoid, what ye please,  
                     Diphtheria,  
 An’ influenza, man’s new tease,  
                     An’ cholera.

“ Sic meikle names, too, as they’ve a’,  
 Soun’s laughable for folks sae sma’,  
 ’T wad nearly tak your breath awa’  
                     Them to get roun’,  
 Or else to gie ye a lockjaw  
                     They wad be boun’.

“ But, big or wee, they fin’ their way  
 To folk’s insides, intent to stay,  
 An’ there sic deev’lish cantraips play  
                     Wi’ flesh an’ bluid,  
 That patients aften frae that day  
                     Dae nae mair guid.”



"The worl' it maun be altered sair  
Sin' in 't I doctor'd my bit share.  
Auld Egypt's plagues are little mair  
Than a fleabite  
To this newfangl'd microbe scare,  
That's come to light.

"But if mankin's sae at the mercy  
O' sic wee d——d impudent gentry,  
Is there nae way to stop their entry?  
Your clever chieils  
Micht at the threshold place a sentry  
To kill the deils."

"Ou, aye, but that's anither crack,  
Whilk to explain some time wad tak';  
Auld Nature's neither lame nor slack,  
Ye needna fear,  
An' sae's provided a bit chack  
To their career."

"Come, hurry then, wi' your new tale,  
For moon an' stars begin to fail;  
The east there's growin' ashy pale,  
An' soon maun I  
Back to my lowly hammock hail,  
An' lanely lie."

"Aweel, I'll be as gleg's I can,  
But, first and foremost, un'erstan'  
That ilk white cell in bluid o' man  
'S a phagocyte,  
Whase trade it is, by Nature's plan,  
Microbes to fight.

"The phagocytes, as soon's they spy  
The blasted microbes sailin' by,  
Rush aff to smite them hip an' thigh  
Withouten quarter;  
Till heids and thraws their corpses lie,  
A mighty slaughter.

"But 'fore the battle's weel in view,  
The microbes, to their tactics true,  
Frae out their rod-like droddums spew  
A fell toxine,  
Their enemies to mak's blin' fou  
As they'd drunk wine.

"The phagocytes still valiantly  
 Advance in a' their battle 'ray,  
 The bigger cells—the cavalry—  
                                     Gallop right in ;  
 The weer chaps—the infantry—  
                                     Come on ahin'.

"The fight now rages hot an' sair,  
 In front, to right, to left, an' rear ;  
 In heaps are lyin' everywhere  
                                     The dead and wounded ;  
 Nae flag o' truce is hoisted here  
                                     Or retreat sounded ;

**“Till fatted are the hungry kytes  
O’ the victorious phagocytes  
Wi’ the defeated microbe wights,  
Wounded an slain,  
That they’ll nae mair in mortal fights  
Engage again.**

“ But should the microbes wi’ their brew,  
Whilk they out o’ their droddums spew,  
Succeed in makin’ mortal fou  
                    The phagocytes,  
That they gang stoit’rin’, stach’rin’ through,  
                    In ithers gaits ;

“They dose them deeper wi’ toxine,  
Till they do clean their senses tyne,  
Then owre their bodies, prancing fine,  
In swarms they flow ;  
In patient’s bluid the storm bursts syne,  
Soon lays him low.

**"Though whare he weathers the attack,  
It's pairt o' Nature's cunnin' wark  
In 's purple stream secret to mak'  
                A substance wise,  
Whilk does the murd'rous toxine dark  
                Antagonise.**

"An' sae he's rendered quite immune,  
 Syne out his fever safe does soom,  
 His wonted health back to resume,  
     An' daily wark ;  
 At the toxine he can snap his thoomb,  
     As blithe's a lark.

"The upshot then o' a' this din  
'S that drugs are cast'n to the win',  
An' serum-therapy brocht in ;  
                A wee injection  
O' antitoxin 'neath the skin  
                'S the gran' protection."

But just as I 'gan to explain  
How serum frae horse-bluid was ta'en,  
A blasted cock, down some by-lane,  
Let out a craw,  
An' 'fore I kent the ghaist was gane,  
Clean stown awa.

## CASE OF MYOCLONUS MULTIPLEX.<sup>1</sup>

**By GEORGE S. MIDDLETON, M.A., M.D.,**  
Physician to the Glasgow Royal Infirmary.

JOHN W., æt. 28, labourer, was admitted on 14th October, 1899, complaining of trembling in the limbs and weakness. On account of impairment of his memory, it was difficult to get a detailed account of his illness. Apparently it began three years before, with trembling in all the limbs, which gradually increased in severity. He could not say in what limb the movements first commenced. His work was arduous, necessitating his carrying heavy weights, but he was able to continue at it up to eight months prior to admission. From that time the tremors greatly increased, and, to support himself, he took to hawking laces in the streets, where, however, he had to take up his stand, as he was unable to walk from door to door on account of his tendency to fall. He was often dazed and stupid, but he never lost consciousness. Since the beginning of his illness he has been troubled much with severe headaches, which were not worse at night. He had had no lightning pains and no feeling of constriction round the waist. His appetite was bad, and he had difficulty in taking food and drink owing to the jerking movements; he had difficulty especially in swallowing liquids. The bowels had been loose, and he had at times lost control both of the bowels and of the bladder.

Six years before admission he had had gonorrhoea, and, six

<sup>1</sup> Read at a meeting of the Glasgow Medico-Chirurgical Society held on 1st December, 1899.

months later, a second attack, with bubo; while a year later he had syphilis, with a hard chancre, for which he received no treatment. Nothing of importance could be learned from him as to the family history. The following notes are from the Ward Journal:—

"16th October, 1899.—The absence of expression is very striking; he looks melancholic, and rarely directs the eyes towards one. There is no tremor of the lips, nor is the tongue tremulous when protruded, and only very rarely do any of the facial muscles twitch, except the masseters. While watching him as he lies in bed, the legs especially are the subjects of convulsive movements, which are most marked in the extensors, the quadriceps extensor femoris being at times in a state of clonus. The same may be almost said of the tibialis anticus. This spasmodic contraction prevents him from standing steadily and from walking. It is quite evident that there is very appreciable diminution of the muscular power in the legs and also in the hands and arms. Spasmodic movements are also present in the muscles of the arms, especially about the shoulders, but he can hold out his hands fairly steadily.

"The movements in some respects suggest chorea: they are more, however, of the nature of a clonic spasm. They differ from those of disseminated sclerosis in not being exaggerated on intentional movement. They do not cease during sleep. There is no nystagmus.

"19th October 1899.—As he lies on his back, it is noted that in both legs the quadriceps extensor femoris is affected more than any other muscle, and in each leg it is affected in the whole of its extent. Its contractions are sudden and strong, like those induced by an electric current. They number from 80 to 100 per minute, are symmetrical, and mostly synchronous on the two sides. When he lifts his legs off the bed, the voluntary movement arrests the spasm. The gluteal muscles are also affected, but their contractions do not number more than 22 per minute, are very irregular in their recurrence, and are not of great vigour. The muscles of the calf are very slightly involved. There is an occasional twitch of the foot, but practically none of the toes. The above noted movements in the arms are all but limited to the shoulders. The recti abdominales are also involved, but the diaphragm apparently is not, and the heart shows no irregularity. The muscles are not atrophied beyond what may be accounted for by want of use. The deep reflexes are exaggerated, jaw-jerk, arm-jerk, and knee-jerk being all extremely marked, but there is no ankle-clonus. Plantar reflex is also exaggerated.

"When he is made to sit with his legs over the side of the bed, the contractions of the quadriceps almost entirely cease; while contractions of the muscles of the leg, especially those causing dorsal flexion of the foot, become very marked. In addition to the larger contraction, a certain amount of fibrillary tremor is observed in the muscles of the calf. The toes are occasionally flexed and extended, but these movements are rare. While sitting, the movements of the masseters are well marked; when he stands on his feet, contraction ceases in the muscles of the calves, but again become vigorous in the quadriceps extensor on both sides.

"The electrical reactions are normal. Sensation, both to simple contact and to painful stimuli, is apparently normal.

"The muscular sense and the sense of temperature seem normal, but his replies to queries are not always trustworthy. His mental condition is somewhat confused, and his speech is affected, his voice being almost a whisper, and his words sometimes slurred. His eyes have been examined by Dr. Rowan, and found to be normal."

This man remained in the hospital till 6th December, 1899. During that time he occasionally suffered from loss of control of the bladder and rectum. He had all along a fixed idea that his trouble was due to syphilis, and he was constantly asking for drugs for that disease. At times his mental condition was such that he refused food, refused to speak, and presented well-marked evidences of insanity. This condition had almost passed off before his dismissal; it was not due to fever, as the temperatures throughout were normal or subnormal. The muscular movements were sometimes so excessive, even during sleep, that he fell out of bed. When dismissed, he was able to walk with very slight assistance.

This case was sent in as one of chorea, but the movements were of such a nature as to exclude that disease. Their clonic character, their rapidity and rhythmic nature, and the fact that the spasms affected almost entirely muscles in a state of relaxation, tended to exclude all the more common forms of muscular spasm, so that ultimately a diagnosis of myoclonus multiplex was reached, which seemed to be confirmed by the facial expression and the mental condition. From what was seen of this man, it probably would not be far wrong to regard this affection as closely related to hysteria. The treatment adopted was mostly bromide of potassium and chloral, and its success was not greater than was anticipated.

THE HYGIENE OF THE MOUTH FROM THE INDIVIDUAL  
AND PUBLIC HEALTH ASPECTS.

By ALEX. J. F. SKOTTOWE, M.D.,  
Medical Officer of Health, Helensburgh.

WITHIN recent times the disadvantage of being the possessor of a mouth more or less full of bad teeth must have been prominently brought under the notice of a great many people through the number of rejections from this cause of men for active service. This must have appealed to us through our many friends who were anxious to go to the front, but who were not accepted because their teeth were bad.

Now, the first and one of the most important acts of digestion takes place in the mouth. By the action of the masticatory muscles, and when the teeth are good and sound, the food is crushed and thoroughly broken up, carried about the mouth by the tongue, and abundantly mixed with the saliva, which converts the starchy matter into sugar. If the food be not well masticated, and so not freely mixed with saliva, solid portions enter the stomach more or less in lumps, and the starch will not have been acted upon, or only so to a slight extent. The stomach thus gets work to do which is not expected of it, and in time dyspepsia in some form or other is sooner or later set up.

I do not intend to go into the subject of the digestive processes from a physiological point of view, but will content myself with pointing out that the opposite condition, namely, that of indigestion or dyspepsia, leads in time to a want of assimilation, and consequently to diminution of physical vigour, anæmia, constipation, or intestinal catarrh. This explains why the surgeons of Her Majesty's army insist upon having, for the service, men with good sound teeth.

Apart, however, from these disabilities for public service, and the disastrous results above noted which accrue from bad teeth, there are many other ways in which this cause tells injuriously on the human economy.

Every scrap of food, and probably the great bulk of the air we breathe, enter the system through the mouth. The air we inhale contains certain impurities, principally in the form of suspended matter; from the mineral kingdom, in the form of chemical constituents of the soil; from the vegetable kingdom,

in the form of spores and pollen, &c.: and from the animal kingdom, in the form of bacteria, and the living or decaying cells of various tissues.

The bacteria or microbes are by far the most important from a health point of view, but, fortunately, they vary in quantity according to local and meteorological conditions.

It would, however, be unnecessary to tell here the story of the bacteriology of disease, or to enlarge upon the brilliant results which have accrued from its study to preventative medicine; but it may be taken as a fact that all the infectious fevers are due to the action on the system of organised bodies of microscopic size.

The specific febrile diseases are grouped together under the title infectious or contagious. These terms were at one time employed in two different senses, but they are now used synonymously, and indicate capability of communication to the healthy of disease through the agency of specific poisons or contagia discharged from the body of the sick.

Within recent years special study has been given to the investigation of the nature of these poisons, with the result that many have been isolated, and made "the captives of the laboratory." They have been separated from the body, examined under the microscope, cultivated in various media (broth, jelly, &c.), and their life-history revealed. They vary in size, shape, and properties, and are grouped together generally as micro-organisms, though subdivided for scientific reasons into several classes. Speaking generally, these microbes require for their cultivation food, moisture, heat, and, preferably, the absence of light.

I have referred to the microbial impurities of the air we inhale, and I would add that during expiration a considerable amount of organic matter is given off by the breath. This has a very offensive smell, and the sickly odour of an overcrowded room hangs about the nostrils, and is not easily got rid of. This organic matter assists the growth of all kinds of organisms, and it has been found that food, such as milk, rapidly becomes tainted when exposed to it.

Surely, then, the mouth containing decaying, cavernous teeth, which are covered with tartar, discoloured with dead and living matter, and with the interstices filled with decomposing food, forms an ideal "locus" for the development and growth of bacteria—all the conditions necessary are present, *palatum*, moisture, and warmth.

The bacilli of tubercle, of diphtheria, and hundreds of other



varieties of micro-organisms, have been found in the green slimy material scraped from such teeth, and one observer has pointed out that the suppurating glands so commonly found in the neck actually result from the action of the tubercle bacilli which have found their way to the glands along the lymphatics of the mouth.

In these cases the mouth thus becomes a source of self-infection, frequently resulting in "patchy" (diphtheritic) conditions, and various inflammations of the mucous membrane of the mouth, throat, and nose.

If these be some of the risks to the individual through the action of micro-organisms from an insanitary mouth, the risks which the general public run are but slightly less, through the filthy and disgusting habit of expectorating so commonly and constantly indulged in by certain classes of the community. In railway carriages, tramway cars, steamers, and even in the streets, the loathsome custom is only too much in evidence.

In diseased conditions, such as in consumption, in whooping-cough, measles, and in many other infectious diseases, the sputum is known to contain the specific bacilli.

I purposely draw attention to the first two named diseases, because the sufferers from them are commonly allowed to go about and to cough and expectorate freely both in the house and in the open air. This expectoration, becoming dry, frees the infective material, which is consequently wafted about broadcast by the action of the winds.

If this cannot altogether be stopped, and it seems no easy matter to do so, except by isolation or segregation of the sick and disinfection of the sputum, it is surely time to protest against a habit which, I believe, is instrumental in spreading infection among school children. I refer to the method generally adopted of "cleaning" slates. I am assured that in most of our schools the slates supplied to the pupils are used indiscriminately, that is to say, the same child does not use the same slate each day, nor even in each division of the same day. The method of cleaning the slate is almost too well known to require repeating. However, it is performed by moistening the fingers with saliva, or spitting upon and rubbing the surface till it is so-called clean. Now, such diseases as consumption, scarlet fever, diphtheria, whooping-cough, and, possibly, measles, are spread by the actual transference of the specific germs from a diseased to a healthy mucous membrane, such as found in the mouth. Many of these cases are so slight as to escape recognition at the time.

and, though infected, are still consequently attending school, or else through carelessness they are not removed till serious symptoms develop, so that the risk of directly carrying infective material from the mouth to the slate will be easily understood. A child with, let me say, a slight sore throat is given a slate, which is cleaned in the usual way. By the ordinary process of evaporation, &c., the solid (and infective) products of the saliva are deposited. The following, or possibly the same day, a healthy child uses that particular slate, and proceeds to clean it *secundum naturam*, hence he runs the risk of carrying the specific germs deposited by the previous user of the slate directly to his mouth.

The schoolrooms are large, high in the ceiling, and well ventilated, with plenty of sunlight, yet infectious disease continues to spread. Perhaps the explanation I have offered may illustrate how these diseases may be propagated. I cannot help feeling that many cases of infectious disease occurring amongst school children have this simple method of origin. Apart, however, from the risk suggested, it will, I think, be granted that the present practice of the so-called cleaning of slates is, at least, dirty, and ought not to be encouraged. I would therefore propose that each child should possess a slate (furnished with a sponge attached by a string), labelled distinctly with the owner's name, for personal use only.

This would be the first step in the right direction, and by precept and practice would eventually tend to diminish, in the rising generation, the dangerous habit of general expectoration.

With regard to the individual, it is surely a part of the home duty of parents to see that their children clean their teeth once, but preferably twice, a day, just as they see that the faces and hands are washed. There are plenty of excellent tooth-powders and washes on the market, but a little boracic acid or a pinch of baking soda in a tumblerful of tepid water makes a cheap and cleanly mouth-wash, and I am certain that the regular use of the tooth-brush would not only diminish disease in the individual, but would also minimise the risk of general infection.

NOTES ON CLINICAL GYNÆCOLOGY.<sup>1</sup>

By JOHN M. MUNRO KERR, M.B., C.M., F.F.P.S.G.,

Assistant to the Professor of Midwifery, University of Glasgow ; Assistant Physician, Maternity Hospital ; and Dispensary Physician for Diseases of Women, Western Infirmary, Glasgow.

CASE I.—*Large suppurating cyst of right broad ligament in which the pedicle became twisted during woman's removal to Western Infirmary.*

Mrs. N., aged 35, was admitted to the Western Infirmary on 11th. August, while I had charge of Professor Murdoch Cameron's ward.

She stated that she had three children, and that the last was born fully a year ago. After her last confinement she "fevered," and had to remain in bed for a considerable time. She had never been well from that date, she said, and three months ago she took to bed, and had been confined to it ever since. She frequently suffered from sickness and vomiting.

On admission she was quite collapsed, had a feeble, rapid pulse, and complained of a swelling in the lower part of the abdomen. The swelling, she thought, she had first noticed about three months prior to admission.

On examination of the abdomen, a large tumour, elastic to the touch, and about the size of the adult human head, could be felt, lying rather more to the right than the left side. By bimanual examination it seemed to arise from the right ovary. It was only slightly movable, and there was some tenderness over it and the abdomen generally.

The day after admission patient complained of severe pain over the tumour. She was also very sick, and vomited frequently. The two following days the pain continued, but was less severe, as also was the sickness.

On the fourth day after admission she was rather better, so I decided to open the abdomen. On doing so, I found a large cyst connected with the right broad ligament. I punctured it to allow of its collapsing, and so permit me removing it without extending the abdominal incision. In so doing, a small quantity of pus (the whole contents of the cyst were of pus) escaped into the abdominal cavity. The pus was sponged away as carefully as possible. The removal of the cyst after the evacuation of the contents presented no great difficulty.

<sup>1</sup> Specimens shown at a meeting of the Glasgow Medico-Chirurgical Society held on 3rd November, 1899.

The adhesions that had to be separated were loose, and of very recent origin. The pedicle was twisted two turns from right to left. Although the cyst was not acutely strangulated, it was markedly congested. The circulation had evidently only been partially interfered with by the torsion of the pedicle.

The abdomen was not washed out, and no drainage-tube was inserted.

The pus (90 oz.) removed from the cyst had no smell. Professor Muir very kindly made an examination of it, and found only streptococcus pyogenes present.

Several portions of the tumour were examined microscopically.

The conclusion come to was that the cyst was an old broad ligament one, which had become infected during the last puerperium. The ovary seemed quite healthy, and was flattened out on the cyst wall, and the tube could be followed throughout its whole length.

The woman died on the fifth day after the operation. Unfortunately no *post-mortem* examination was allowed.

The manner in which this woman died was very striking. During the days preceding her death there was absolutely no tenderness or distension of the abdomen, the temperature was never higher than  $99.8^{\circ}$ , and usually much below that figure, except on one occasion, when it registered  $100.2^{\circ}$ . The tongue was always moist and fairly clean, and she persisted in saying up to the end how exceptionally well she felt. The only indications of a probable fatal termination occurring were given by the pulse, which, on the third day, ran up from 95 to 116, and by the exaggerated feeling of well-being.

I have several times seen cases of very severe and fatal sepsis after abdominal section, and during the puerperium, where there was very little rise of temperature, very little tenderness or distension of the abdomen, but never one—I consider this patient died of sepsis—in which there was such entire absence of all local symptoms.

The pulse here early gave an indication of the seriousness of the condition. It is always so. The pulse is an infinitely more valuable guide to the condition of a patient after operation, or during the puerperium, than the temperature. The feeling of well-being was very striking. It, with the rising pulse on the third day, led me at that time even to entertain very little hope of the patient's recovery.

The twisting of the pedicle must, I think, have occurred during the patient's removal to the infirmary, as the adhesions were very loose and of quite recent origin.

Before the operation, I mentioned to some students who were present that we might possibly find the pedicle twisted, but, on the whole, I was inclined to think that the localised peritonitis was from infection of the peritoneum by some of the cyst contents. I came to this conclusion because the patient had been suffering much pain from time to time in the abdomen, and sickness for months, before her admission to the infirmary.

I think the history clearly points to the infection of the cyst having occurred during the last puerperium, for, as she said, she fevered then, and had never been well from that time.

*CASE II.—Cyst of right ovary—Infantile uterus—Ovulation without menstruation.*

Miss A. S., æt. 23, was sent to me by her medical attendant, Dr. Prentice, of Kilmarnock, in the beginning of the present year. He informed me by letter that the uterus was very small, and that there was a swelling to its right side. On examining the patient, I confirmed his diagnosis. I found the uterine cavity measured only  $1\frac{1}{2}$  inch in length, and that there was a sausage-shaped swelling at the upper part of the right broad ligament. I could feel no ovary in the right side, but made out the left one quite distinctly. I found the woman well developed, both mentally and physically; the breasts were well formed, and hair was present both in axilla and over mons veneris, and altogether she looked the picture of health. Briefly her story was as follows:—

From the age of 16, at regular intervals, she suffered from most severe pain in the lower part of the abdomen. This pain lasted usually two days, and was so severe that it prevented her from attending to her household and other duties, and frequently necessitated her taking to bed. Along with these severe attacks of pain, there were always the feelings of general discomfort that are commonly the accompaniment of menstruation. *She stated, however, that she had never once menstruated.*

Tonics and sedatives were recommended and tried, but had no effect. No attempt was made to make the uterus menstruate, either by emenagogues, electricity, or stem pessaries, &c.; the uterus was too imperfectly developed for that. I agree with Herman when he says, in his most excellent text-book on gynæcology, "I advise against any attempt to make an imperfectly developed uterus menstruate."

About three months ago the patient returned to see me,

and informed me that the pain was nearly unbearable, and that she could not stand it any longer. I examined her again, and found the pelvic organs in the condition I have already described. I advised that the cyst and other ovary be removed. This was done with no great difficulty. The right ovary, which I pass round, was cystic. The left had one or two distended follicles on its surface. I examined it microscopically, and found Graafian follicles in various stages of development.

The woman made an excellent recovery, and her doctor informs me that she has had no pain since the operation.

The interest attaching to this case is the fact of this patient having had periodic congestions of the pelvic organs, and, presumably, ovulation, and yet having never menstruated. It seems that for menstruation to occur, not only must the ovaries be present and the cyclical periods of congestion, but there must also be a well-developed uterus.

Reading the other day Hirst's *Text-book of Obstetrics*, published a few months ago, I found, on p. 64, reference to a case exactly similar to the one I have related. Hirst says—"Finally, I was once obliged to remove the ovaries in a case of ill-developed infantile womb, associated with well-developed ovaries, in which there was a violent exaggeration of the menstrual molimen every month, without a discharge of blood, and the consequent relief of menstrual congestion. The ovaries were found, after their removal, to be filled with well-developed Graafian follicles and numerous depressions, representing corpora lutea. In one of these ovaries there was a corpus luteum that would have answered for an illustration of the yellow body of pregnancy."

*CASE III.—A large myoma of uterus, with adhesions, removed by enucleation.*

J. N., æt. 35, single, asylum attendant, was sent to the Western Infirmary by her medical adviser, Dr. Todd, Maryhill, while I was acting for Professor Cameron there in August last. She was admitted on the 18th, complaining of a large abdominal swelling and of great pain in the lower part of the abdomen, which was always specially severe after eating or taking any purgative medicine. She stated that she had altered regularly since she was 14 years of age, and that, in addition to pain at the times mentioned, it was always very severe during the week preceding a menstrual period.

An examination was made, and the diagnosis of her doctor,

that the tumour was a fibromyoma of the uterus, was confirmed.

On more careful examination under chloroform, the large hard swelling, which I pass round, was felt. It occupied the middle line of the abdomen, and had a slight depression on its upper surface. It was connected with the uterus at the fundus, but not very extensively. The tumour seemed to be freely movable. The uterine cavity was not appreciably enlarged. The diagnosis of a pedunculated subserous fibromyoma was made, and an operation recommended.

Two or three days later I removed the tumour. This was accomplished, however, with the greatest possible difficulty. Instead of being freely movable in the abdominal cavity, as I thought, the tumour was attached by strong adhesions to the abdominal wall: indeed, it was part and parcel of the wall, and seemed to derive its blood-supply from there rather than through its connection with the uterus. It was also closely adherent to the transverse colon and mesocolon.

I first separated the tumour from the abdominal wall, then enucleated it from the uterus, and, finally, detached it from its connection with the bowel. The bleeding was dreadful. The woman became absolutely collapsed, and all present expected she would die on the table. As quickly as possible I ligatured all bleeding points after detaching each part, stitched the uterine wound, and brought the raw surfaces of the mesocolon and colon together and stitched them. As far as I could judge, all bleeding was arrested. I put in a drainage-tube, however, so that I might see if any bleeding occurred after the patient recovered from the shock. Finally, I stitched up the abdominal wound in one layer, applied the dressings and bandages, and injected two pints of saline solution into the submammary tissue, and put the patient to bed. She recovered consciousness soon, and seemed very well, but about six hours after the operation blood began to escape from the tube, and the pulse got weaker. I therefore reopened the abdomen, found two bleeding points on the abdominal wall, and some oozing from the intestinal surface; none, however, from the uterine wound. I got all the bleeding stopped again by ligatures, closed up the abdomen, but did not introduce a drainage-tube. I then bound up the patient very tightly, and again injected some saline solution.

I need not trouble you with the after-history of this patient, suffice it to say that she made a most uneventful recovery.

This case is one of great interest in many respects. The

extensive adhesions and large quantity of ascitic fluid are conditions found very rarely accompanying myomata of the uterus. As I have said, the connection with the abdominal wall was so intimate that the tumour seemed to derive its blood-supply from there, rather than through the uterus. Doubtless the tumour was more mobile because of the ascitic fluid present.

Of special interest in connection with the adhesions was the pain complained of by the patient after taking food or purgative medicine, for, no doubt, these discomforts were caused by the tumour being adherent to the transverse colon.

As regards the wisdom of using a drainage-tube for the purpose of indicating the occurrence of hæmorrhage I am very doubtful, for with a drainage-tube in the abdomen one cannot bandage up a patient so tightly as one can when there is none.

# CASE OF EPITHELIOMA OF THE ŒSOPHAGUS INVOLVING THE PNEUMOGASTRIC NERVE WITH ITS RECURRENT BRANCH ON THE RIGHT SIDE, AND WHERE THE SYMPTOMS CLOSELY POINTED TO ANEURYSM OF THE ARCH OF THE AORTA.<sup>1</sup>

By J. SOUTTAR M'KENDRICK, M.D., F.R.S.E.

WITH the kind permission of Sir William T. Gairdner, in whose wards the following case occurred, while I acted as his house-physician, I have the privilege of bringing before the Society notes of a case where the symptoms (although not exclusively) pointed to aneurysm of the aorta, but which ultimately (*post-mortem*) were found to depend upon an extensive epithelioma of the œsophagus.

Although the symptoms resulting from epithelioma of the œsophagus are, as a rule, pathognomonic of the disease, this is by no means the only case where such a difficulty has arisen, and where the symptoms of the one have been almost identical with those of the other. Dr. Newman,<sup>2</sup> for example, quotes a case of epithelioma of the œsophagus at the level of the bifurcation of the trachea, wherein the symptoms bore a close resemblance

<sup>1</sup> Read before a meeting of the Glasgow Medico-Chirurgical Society held on 17th November, 1899.

<sup>2</sup> Newman, *Malignant Diseases of the Throat and Nose.*



to a case of aneurysm of the transverse and descending portions of the arch of the aorta, while literature teems with instances where the symptoms, themselves suggestive of aneurysmal disease, depended upon an œsophageal origin. In this connection, Sir William T. Gairdner, in his recent article on "Aneurysm of the Arch of the Aorta," in Dr. Clifford Allbutt's *System of Medicine*, when speaking of the difficulty of arriving at an absolute diagnosis of aneurysm, says "that the whole of the symptoms present may be those of stricture of the œsophagus, and instruments may be employed with disastrous results."

As a rule, however, the difficulty of diagnosis in diseases at the upper part of the thorax is between aneurysm and mediastinal tumours of a carcinomatous or sarcomatous nature, and here, too, it is often only after a careful perusal of all the facts presented to us, and after a minute physical examination of the part under observation, that anything like an accurate diagnosis can be reached.

The symptoms and signs that are almost pathognomonic of aneurysm may be absent even in presence of aneurysm, or may be present when no aneurysm exists. Pain may be present or absent. Cough may be only slight, even when a large aneurysm exists, and may be extremely marked with a small aneurysm. The laryngeal nerves may be unaffected even in presence of an extensive thoracic aneurysm, although this is rare, whereas laryngeal paralysis in other cases may be one of the first symptoms. There may be excessive spasm and stridor from slight pressure on a bronchus, or there may be almost complete occlusion of a bronchus, with no evidence of spasm or laryngeal paralysis.<sup>1</sup>

Hæmorrhage may be one of the first symptoms, even in small aneurysms, whereas, again, in some cases there may be extensive dilatation of the aorta, with no hæmorrhage, until, perhaps, the final gush of blood indicates perforation into the trachea or bronchial tubes, or, again, there may be in such cases no hæmorrhage at all, the patient dying from sheer exhaustion.

Dysphagia may be a severe symptom from the outset, especially if the aneurysm affect chiefly the transverse part of the arch of the aorta, where pressure is necessarily directed from above downwards on the œsophagus. As a rule, however, it is a symptom of minor importance, the slight dysphagia resulting probably from pressure on the pneumogastric nerve and its branches (œsophageal).

<sup>1</sup> Western Infirmary Pathological Reports, No. 5,381.

Again, in making a physical examination, we may find that many symptoms, indeed, most, may be absent in aneurysm of the arch of the aorta. Stokes<sup>1</sup> tells us from his experience that "the absence of localised dulness on percussion should not make us conclude against the existence of an intra-thoracic tumour." There may be pulsation, but this is not necessarily aneurysmal. There may be no expansile pulsation even with aneurysm. There may be differences in the pupils and radial pulses, engorgement of the veins of the neck, it may be only on one side, but these symptoms are not necessarily aneurysmal, while, again, in many cases of extensive aneurysmal disease of the arch there may be no apparent difference in the pulse and pupil of the two sides.

There need not be œdema of face, neck, or thorax, and the "tippet-like" neck of Stokes may be absent.

Although the sounds of the heart may be increased over the suspected aneurysmal site, in some cases there may be only little change. There need be no murmur; in fact, the presence of murmur is considered to be the exception. There may be a deficiency in the respiratory murmur, but this may depend on any intrathoracic pressure. Even with this deficiency there need be no "stridor from below," and, as in the instance above recorded, there may be almost complete blocking of a bronchus with no stridor or paroxysmal dyspnoea.

There may be stridor without aphonia, and, though less commonly, aphonia without stridor.

Of course, when a group of these symptoms occur together, and when inquiry is made into the history of the patient—the sex and occupation, the condition of the vessels and heart—the difficulty of diagnosis is considerably lessened.

One can see at a glance how difficulties in diagnosis arise. The symptoms depend on pressure exerted on the numerous structures crowded together at the root of the neck by a new growth. This new growth may grow rapidly or slowly; it may grow downwards, upwards, backwards, forwards, or to either side; it may push aside structures, or it may obstruct them; the structures which yield may escape, while those that are bound down or fixed are eaten away or occluded.

Tumours behave in different ways, and it is on this account mostly that the diagnosis of aneurysm can be arrived at, for the symptoms usually follow a particular march.

While an epithelioma of the œsophagus, as a rule, introduces a particular train of symptoms, yet we can see here also how such a tumour may involve all the important structures at

<sup>1</sup> Stokes, *Diseases of the Heart*, p. 537.

the root of the neck, especially if the tumour be situated at the level of the bifurcation of the trachea.

It is for this reason that the following case is of interest, the more so as the right recurrent laryngeal nerve was involved in the growth, causing *paresis of the muscles of the right vocal cord*.

Dr. Newman looks upon paralysis of the left vocal cord as almost pathognomonic of aneurysmal disease, and he says, "for practical purposes, aneurysm may be looked upon as the cause of paralysis in 19 out of 20 cases."

Dr. Morell Mackenzie does not go so far, for he mentions that out of one hundred cases of cancer of the œsophagus, he observed that the left recurrent laryngeal nerve was involved in nine instances; the right in one; while in one case he noticed that both recurrent nerves were affected. In fact, in his definition of the symptoms that are characteristic of cancer of the œsophagus, he says that there may be "progressive dysphagia, expiration of a fluid at first frothy but afterwards thick, muco-purulent, and sometimes tinged with blood; obstruction to the passage of a bougie, *frequent paralysis of abductors of the vocal cords*, with progressive emaciation and debility occurring in a person over 40 years of age."<sup>1</sup>

A most interesting case in this connection was described by Dr. Finlayson and Dr. Coats.<sup>2</sup> It was a case of cancer of the œsophagus involving the left recurrent laryngeal nerve, and the body of the last dorsal vertebra by a secondary growth. This article was followed up with a note by Dr. Macintyre on paralysis of the vocal cords from malignant disease. He gives a short bibliographical sketch of paralysis of the vocal cords in cancer of the œsophagus, with the result that such men as Mackenzie, Sajous, Ziemssen, and Lennox Browne have not infrequently found the recurrent laryngeal nerve involved in an epithelioma of the œsophagus.

Although, then, aneurysm of the arch of the aorta is the frequent cause of paralysis of the abductor muscles of the vocal cords, it is not the only cause, as mediastinal tumours, and certain tumours of the neck, may surround the nerve or press upon it, so as to produce a similar paralysis of these muscles.

The case was that of a woman, Mrs. R., aged 68, who was

<sup>1</sup> *Diseases of Throat and Nose*, vol. ii, p. 92.

<sup>2</sup> *Glasgow Medical Journal*, September, 1890.

admitted into the Western Infirmary on 2nd June, 1897, with symptoms of dyspnœa, stridor, cough, and partial aphonia.

The following notes were received from her private doctor:—

In the first, he says that the patient was sent into the Helensburgh Infirmary last January for treatment of ulcer of the leg. While there a swelling was discovered in the neck, described as being the size of a duck's egg. He was of opinion that it was aneurysmal, and potassium iodide was given with good results, so that patient left hospital three weeks afterwards, and with slight subsidence of the swelling. Before he saw her again, which was about one month afterwards, she had a severe bout of coughing, and ejected three-quarters of a cupful of blood, which corresponded with an almost complete subsidence of the swelling in the neck. She has recently been troubled with dysphagia, he writes, and attempts to swallow frequently cause fits of coughing. She is of opinion that her symptoms have been aggravated by personal worry during the last few weeks.

In the second letter, he describes the tumour as like a duck's egg, the one half projecting above the general surface. He says—"The undoubted fact is that there was a pulsating tumour of about this size, which afterwards so diminished in size as almost to disappear, and it was only after careful examination that I excluded thyroid enlargement as the cause of the swelling."

As well as these facts, many other details were presented to us by the patient herself. She feels sure that she noticed a swelling in the neck almost two years ago, situated above the right clavicle, and midway between it and the trachea. It had recently grown much larger, and then subsided again with the coughing up of the blood. The swelling was painless, and never caused any redness of the skin. Breathlessness commenced in February, 1897, and a few weeks later she complained of hoarseness of the voice. Cough developed, which was of a severely paroxysmal type, occurring frequently at night, and lasting for upwards of an hour at a time. She coughed up three-quarters of a cupful of dark, thick blood in the third week of March, 1897, and this she attributes to the bursting of a swelling which was in the right side of the neck, for after the gush of blood the swelling was reduced and the cough became easier. She spat up a little more blood in the middle of April, after which the swelling entirely disappeared.

For some months she has had difficulty in taking food, with a sense of contraction in the throat. Food frequently sticks in her throat, and she has been forced to take fluids lately.

She has now great difficulty in swallowing. Cough is very troublesome, and with it there is an abundant muco-purulent spit. She has lost flesh considerably during the last few months, and she feels very weak.

*Previous health.*—She has always been a healthy woman up to the onset of her present illness, except that when young she suffered from anæmia with palpitation. No history of rheumatism.

*Habits.*—She has never been addicted to alcohol, nor accustomed to any laborious work. She has never had any form of venereal disease. She had eleven normal pregnancies, all her children doing her credit.

*Family history* is not noteworthy.

*Present condition.*—Patient is emaciated and anæmic, but with no distinctly cachectic appearance. The skin generally is flabby and loose. The muscles are soft. The pupils are moderately dilated, equal, and respond correctly to light and visual distance. The tongue is slightly furred. The veins on the right side of the neck are prominent and varicose, but there is no œdema of neck, thorax, or of the legs. The radial arteries are unduly thickened and irregular to the feel; and this is so also of the superficial arteries, more especially of the thyroid axis and femoral branches. The pulses are equal on the two sides, the sphygmographic tracings showing that there is no marked difference between them, but that they are both of low tension. Pulse-rate is 86 per minute; temperature is 99·2° F.; respirations are 28 per minute. Breathing is laboured, and, in a note by Sir William T. Gairdner, "the noise in inspiration, as well as in expiration, and the affection of the voice, taken in conjunction with the other facts, are strongly suggestive of pressure on the trachea; while the imperfection of the cough, as regards closure of the glottis, together with very manifest vocal alterations, which, she says, sometimes went the length of complete aphonia, seem to indicate pressure on one or other laryngeal nerve." Breathing is not relieved by any special posture. Pressure over the trachea causes some pain. There is visible pulsation of both carotids and in the suprasternal notch, and "distinct dilatation of the vessels at the root of the neck." To the outer side of the lower insertion of the sternomastoid muscle there is a pulsatile swelling, apparently due to the dilatation

of the innominate and right subscapular trunks. This pulsatile swelling is about the size of an almond, and is not expansile.

*Heart and vessels*.—Physical examination of the heart and deep vessels reveals nothing abnormal. There is a "little undue impulse with the first sound near the right sternoclavicular articulation, and a little—scarcely perceptible—strengthening of the second sound."

*Lungs*.—There is nothing noteworthy in the examination of either lung, except that over the right interscapular region the respiratory murmur is somewhat hollow in tone.

*Abdomen*.—Hepatic dulness is normal to percussion. The kidneys are not palpable.

*Urine*.—Specific gravity, 1019; acid reaction; amber colour, with distinct albumen, but with no sugar, blood, or tube-casts.

*Larynx*.—The following is a note by Dr. Walker Downie:—"On examination of the throat to-day, there is found to be marked œdema of the left aryepiglottic fold, most prominent over the left arytenoid cartilage. The left vocal cord is fixed, somewhat outside the line of complete adduction. The movements of the right vocal cord are imperfect, this being particularly noticeable during deep inspiration. There is no abrasion of the tracheal wall noticeable, nor is there bulging, such as from pressure, detected."

Such, then, was the history of the case. She only lived for four weeks after her admission into hospital, but during that time notes were taken on the progress of the case.

She had an abundant muco-purulent catarrhal expectoration, with no trace of blood in it, except during the last two or three days of her life, when it was blood-tinged. Tubercle bacilli were never present, and the sputum had none of the appearances of a phthisical expectoration. Stridor and dyspnoea became very marked, but it was never of the highly paroxysmal or suffocative nature. Dysphagia was very marked towards the close of life, so that fluids even had to be abandoned, and nutrient enemata substituted.

Pain in the chest was never present. The swelling in the neck never returned to any size corresponding to that given in the history. No new symptoms developed suggesting the presence or absence of aneurysm, except that the cough became more imperfect, with somewhat of the brassy or clanging nature described by some writers. (Dr. Wyllie, of Edinburgh, giving it the name of the "bovine cough.")

About a week before her death she had a sudden feeling of

faintness and sinking, accompanied by coldness and numbness of the extremities.

The urine averaged, since admission, only 30 oz. in the day, and frequently contained distinct albumen. The temperatures all along tended to pyrexia, reaching, as a rule, 100° F. at night, but subsiding somewhat in the morning.

Patient died from dyspnoea and general weakness. Prior to death there was no sudden onset of symptoms such as might have been expected from hæmorrhage into the pericardium or respiratory tubes, and no change in the physical conditions of the heart and lungs as far as could be examined.

The following is a summary of the *post-mortem* appearances:—

There is slight prominence in the right supraclavicular region, and projecting above the right clavicle at its inner third is a portion of an ovoid, firm, white tumour, evidently glandular. In the deeper part of the neck in the left side, lying on the transverse process of the third cervical vertebra, is a small ovoid tumour, apparently glandular, almost 2 cm. in diameter. This projects in the mucous membrane of the pharynx.

Small cretaceous nodules are scattered throughout the spleen, while the kidneys show evidences of cirrhosis with small cysts. The adrenals, pancreas, stomach, and intestines are normal. The abdominal arteries are markedly atheromatous. Nothing specially noteworthy in condition of pelvic organs.

The lungs are loosely adherent by fibrous tissue to the chest wall. In the left apex are seen tolerably large cavities filled with caseous and cretaceous material. The lung is emphysematous at its margins. The upper lobe of the right lung shows numerous old tubercular lesions, more than in the left. The bronchial glands are not involved. No secondary tumours are found.

The heart is enlarged, and weighs 385 grs., chiefly owing to hypertrophy of the left ventricle, the wall of which attains a thickness of 2·5 cm. The valves are competent. The aortic cusps, first part of the aorta, and anterior segment of the mitral, show atheroma. This is also present around the orifices of the coronary arteries themselves.

“There is a very extensive growth involving the upper part of the œsophagus. It may be traced from a point about 5 mm. beneath the interarytenoid membrane downwards for a

distance of 11 cm. At its upper end it may be traced into the pyramidal fossa, and seems to have invaded the tissue at the posterior part of the larynx.

"The growth has the form of an irregularly outlined sloughing ulcer. Its upper limits are fairly well defined. Its lower limits are less distinctly made out. At the growing edge, especially at the upper part, there are secondary implantations of tumour tissue, involving the muscular wall. Within the irregular edge there is a quantity of shreddy, very friable, tumour tissue, which tends to form polypoid masses, which project into the calibre. One of these masses, 7 cm. by 2.3 cm., is attached to the right edge of the ulcer in its anterior wall. Centrally there is considerable destruction of the œsophageal wall. On the right side the pneumogastric nerve may be traced downwards till it loses itself in the growth mentioned above the clavicle. On the left side the pneumogastric nerve courses free of the growth in its whole extent."

It is unfortunate that no fuller statements were made concerning the recurrent laryngeal nerves, but, certainly, the opinion that those that were present at the *post-mortem* took away with them was that the right pneumogastric nerve and its recurrent laryngeal branch was involved in the more superficial secondary glandular mass, while the left recurrent laryngeal nerve was involved in the deeper glandular mass, which was in continuity with the œsophageal tumour.

In conclusion, I should like to make a few remarks on the diagnosis of this case.

In the first place, the history, so emphatically stated both by the patient and by her doctor, of a swelling about the size of a duck's egg, which rapidly disappeared on the coughing up of a quantity of blood, clearly pointed to an aneurysm of the arch or of its large branches.

It is extremely difficult to interpret the nature of this swelling. It might conceivably have been due to the glandular mass, which lay superficially over the large vessels, suddenly altering its position owing to want of support from the tumour tissue below, this want of support being due to a rupture of one of the larger vessels on the surface of the epithelioma, or the sloughing of a portion of the tumour tissue. It might have been due, again, to venous congestion, more especially of the thyroid veins of the right side causing enlargement of the right lobe of the thyroid gland, the sudden change in its size



resulting from the relief of pressure on the veins owing to the want of support from below.

Aneurysm was also specially indicated by the involvement of the laryngeal nerves. (The right, certainly, was involved, and, I believe, the left too, although the œdematous state of the left vocal cord was quite sufficient to account for its immobility.)

There was also marked atheroma of the larger and smaller vessels, with distinct dilatation of the large vessels at the root of the neck, and pulsation in the suprasternal notch. The stridor, cough, and paroxysmal dyspnœa were alike suggestive, and the accentuation of the first and second sounds of the heart over the second right intercostal space made one closely suspect aneurysmal disease.

As against this, however, there were certain symptoms which were extremely suggestive of obstruction in the œsophagus by a malignant tumour. There was pretty marked dysphagia at an early period, pain in swallowing, clear spit, which after a time became muco-purulent and abundant, and was rarely tinged with blood. Swallowing increased the liability to cough, and produced dyspnœa. There was marked emaciation, although not so great as in cases recorded where the patient has lost 5 to 6 stones in almost the same number of weeks. There was the "dreadful sense of faintness," with cold extremities, and death occurred from exhaustion.

Dr. Morell Mackenzie tells us that out of his 100 cases, death occurred from exhaustion in 78 instances.

There was no deviation of the trachea, or tracheal tugging: no change in the pupils or pulses of the two sides; no œdema of neck, face, or thorax; no prominence in upper part of chest, nor heaving impulse: no marked alteration in the character of the sounds in the upper sternal region; and no distinct difference in the quality and quantity of the respiratory murmur on either side of the chest.

Had an œsophageal bougie been passed, the question of diagnosis would have been cleared up; but were we justified in adopting such a procedure in this case?

# THE CLINICAL EXAMINATION OF THE BLOOD AND ITS BEARING ON THE DIAGNOSIS AND PROGNOSIS OF DISEASE.<sup>1</sup>

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ANYONE who reflects on the striking progress of medicine in these, the closing years of the nineteenth century, must admit that one of its outstanding features is the elaboration of clinical methods in the diagnosis of disease. The services of the bacteriologist, the microscopist, and the clinical chemist are daily being called into greater requisition, with the result that clinical diagnosis of to-day has attained to the position of a fine art, and even the busy general practitioner makes use of methods which ten years ago were little known outside a hospital ward.

Of these, one of the most important is the examination of the blood, and we can well understand its value when we consider how intimately that fluid is influenced by all the nutritive and metabolic processes of the body, and how profoundly it can be affected in disease. Its study throws light on many morbid conditions besides those usually classified as diseases of the blood, and from it we may gain useful information in widely differing diseases, of which, if I may quote a few examples, cancer, diabetes mellitus, malaria, pneumonia, enteric fever, and septicæmia may be cited as instances.

The remarks I purpose making to you to-night are based on a large number of blood-examinations (over four hundred) which I have conducted during the past two years, partly in private practice, but to a greater extent in the Western Infirmary, where, through the kindness of Dr. Finlayson, I have enjoyed many opportunities for this branch of clinical work ; other cases have been studied in the Cancer Hospital, the Samaritan Hospital for Women, and at Belvidere.

Among the cases which came under my observation for this purpose may be mentioned pernicious anæmia, many varieties of secondary anæmia, chlorosis, splenic anæmia (?), and Hodgkin's disease ; cancer of the jaw, tongue, gullet, stomach, breast,

<sup>1</sup> An address delivered to the Glasgow Southern Medical Society, 22nd March, 1900.

and uterus; sarcoma in various parts of the body, enteric fever, tubercular meningitis, pregnancy, fibroid and ovarian tumours, jaundice, atrophic and hypertrophic cirrhosis of the liver, diabetes mellitus, rheumatism, pneumonia, phthisis, lead poisoning, Addison's disease, myxœdema, and goitre. What I desire to bring before you is the result of my personal observations in some of these cases, what I found myself in making the examinations, and not what text-books of clinical medicine or pathology say you may or ought to find in these conditions.

The subject is a wide one, and the time at our disposal is somewhat limited, so that conciseness must be a necessary element in my remarks this evening. The subject may, perhaps, be overtaken most satisfactorily by first enumerating categorically the various points to which attention may be directed in the clinical examination of the blood, and then considering each of these points in detail under two heads, (1) the technique or method of investigation, and (2) the practical information which may thus be acquired both for diagnosis and prognosis. It may not, I may add, be necessary to pay attention to all these points in every case.

Points to be investigated in the clinical examination of the blood:—

1. Red cells (number, form, varieties, and rouleaux formation).
  2. Leucocytes (number, variety, and staining reactions).
  3. Estimation of hæmoglobin.
  4. Blood platelets (number).
  5. Specific gravity.
  6. Coagulability.
  7. Alkalinity.
  8. Staining reaction to aniline dyes of the blood as a whole and of the leucocytes in particular.
  9. Presence of parasites or of micro-organisms.
- Let us now consider these points in detail.

1. *The red cells.*—In health these number about 5,000,000 per c.mm. in the adult man, in women the number is slightly below this. Their enumeration is readily accomplished by the Thoma-Zeiss hæmacytometer, which is in two parts, (1) a pipette in which the blood may be diluted 100 or 200 times as desired, and (2) a counting slide, each division of which is equal to  $\frac{1}{1000}$  c.mm. Having ascertained the average number of red cells in a square by counting those in a large number

of the latter and dividing, we multiply by 4,000 and then by 100 or 200 (according to the dilution), and thus obtain the desired answer. In addition to the count of the red cells, we must study their general appearance in a fresh film diluted with normal saline solution, or in a film in which they are fixed by 2 per cent osmic acid.

Out of about 100 examinations of the red corpuscles, all variations in number were found from five millions to less than one million per cubic millimetre. Oligocythæmia, or diminution in number, was met with in all kinds of secondary anæmia, the cells at the same time frequently showing distortion (poikilocytosis); in chlorosis the count does not fall far below the normal, while in pernicious anæmia the cells are greatly reduced in number. The lowest count obtained was 640,000 per c.mm. in a case of pernicious anæmia, ending fatally; and not only are the red cells greatly diminished in this disease, but they also exhibit poikilocytosis, form badly into rouleaux, and usually present abnormal varieties such as nucleated cells, larger or smaller than the healthy corpuscles (megaloblasts and microblasts). Polycythæmia, or excess of red cells, is a less common condition; it is met with in persons residing in high altitudes, as well as in the newly born. I met with only one case exhibiting it, viz., a man suffering from obesity, general plethora, and cardiac irregularity. The red cells numbered 7,000,000 per c.mm.

The examination of the coloured corpuscles throws most light on the blood diseases proper, but there is one general disease where the positive diagnosis can be made from their careful microscopic study. I refer to malaria. We have here but little chance of investigating acute cases of ague, and the chronic cases we do see are not the best suited for the study of Laveran's hæmatozoon. This minute organism passes part of its life cycle inside the red cells, which it destroys in its growth. Not only can the careful study of stained films of malarial blood enable one to make a positive diagnosis, but the very type of the fever can be ascertained, because the paroxysm of the fever is coincident with the escape of spores from the red cells into the blood; and, by observing how long is required for the spores to ripen (forty-eight or seventy-two hours, for example), we can tell whether the blood under examination is from a case of tertian or of quartan fever.

Much may be expected from the bacteriological examination of the blood in the near future. It is of interest to note that both the bacillus pestis and the bacillus icteroides (Sanarelli),

the microbe of yellow fever, may be cultivated from the blood during life.

Of parasites in the blood, the most interesting, perhaps, is the *filaria sanguinis hominis*, the commonest variety of which is *filaria nocturna*, so named because its embryos are found in the peripheral circulation only by night, or when the patient is asleep. The embryo is an eel-shaped organism, about one-seventieth of an inch in length, and as broad as a red blood cell. It is best sought for by removing a drop of blood from the lobe of the ear, diluting it with a drop of normal saline solution on a slide, and ringing with vaseline to prevent drying up. It is absent in many cases of elephantiasis met with in this country, and in a case I examined lately could not be found.

2. *The leucocytes or white corpuscles.*—These are, strictly speaking, not blood corpuscles, but body-cells, and are suitably designated by the name leucocyte. They are of great interest in the clinical examination of the blood, since they vary very much more than the red do in general diseases. Normally, they number 6,000 to 8,000 per c.mm., their enumeration being accomplished by the Thoma-Zeiss counting-slide, but a special pipette is used whereby the blood may be diluted 10 or 20 times, instead of 100 or 200 times as for the red. To facilitate counting, the diluting fluid used may consist of very dilute acetic acid (0.3 per cent), which destroys the red cells, leaving only the leucocytes visible in the field.

Whereas, in health, all the red cells are practically identical, we find that this is not the case with the leucocytes, but that in every hundred there are 60 to 70 large polynuclear cells, 20 to 30 small mononuclear, 4 large mononuclear and transitional forms, and from 1 to 4 eosinophiles or cells containing granules with a special affinity for eosin and other acid stains. These different varieties are best studied in stained and fixed blood-films, information regarding which you will find in various modern text-books on the blood, such as those by R. Cabot, A. Coles, and others.

In health, we find that the red cells maintain a fairly constant number, but this is not the case with the leucocytes. They are decreased by starvation, and increased by taking food. Normally, after every meal, a digestive leucocytosis occurs in two or three hours, the number rising from, perhaps, 7,000 to 10,000 per c.mm. It has been noticed that this does not take place in many cases of cancer of the stomach, and Schneyer and others have suggested that this

might be utilised in making a diagnosis of obscure cases of malignant disease of that organ. I have made a series of observations on this point during the past year or two, which I hope to publish before long. I may say that I have not found this phenomenon a constant one, though it does occur in, perhaps, the majority of cases. In infants, again, the leucocyte count is always higher than in the adult; and during pregnancy we also find an increase in these cells, even though the woman be in excellent health. In a case I observed lately, from the third to the ninth month of pregnancy, the following counts were obtained as an average:—15,000, 12,770, 23,800, 28,000, 14,400, 18,000, 18,000: the count before gestation commenced, was 7,000 per c.mm. It is quite possible that this might be made use of in the differential diagnosis between pregnancy and either fibroid and ovarian tumours. In a number of counts made in the two latter conditions, I never found any increase in the white cells.

Leucocythæmia or leukæmia is the morbid condition which, *par excellence*, shows a great increase in the leucocytes. In particular, the splenic variety of this disease shows an enormous host of these cells, their total number being sometimes as much as 350,000 per c.mm., while their ratio to the red corpuscles may be 1 in 15 or 1 in 10, instead of the normal 1 in 700. Not only so, but we find a new and pathological variety of leucocyte present, termed "myelocytes," large mononucleated cells, the large round or oval nucleus being surrounded by granules, which stain with neutral dyes. In the lymphatic variety of leukæmia, these cells are absent, and the increase in the leucocytes is due chiefly to the small lymphocytes which normally exist in the blood. In Hodgkin's disease, on the other hand, there is either no leucocytosis or only a slight one; in several cases examined, I found no count above 10,000 per c.mm.

Splenic anæmia, again, is a condition where, with anæmia and an enlarged spleen (and not unfrequently hæmatemesis), there is no leucocytosis at all, or in which there may be even a diminished count—leucopenia. I have seen one fairly typical example of this, where repeated estimation of the white cells never yielded a count above 3,000 per c.mm., the red cells at the same time being under 3,000,000, and the hæmoglobin only 22 per cent. In many cases of pernicious anæmia, the leucocyte count is low, while in most cases of cancer it is increased distinctly. Of the latter disease, the following examples may be given as average counts:—Cancer

of breast, 12,000 ; of liver, 13,800 ; of jaw, 14,000 ; of throat, 22,700 ; of stomach, 12,700 ; of gullet, 15,000.

Leucocytosis is almost always found in inflammatory and infective morbid processes, of which erysipelas, pneumonia, septicæmia, diphtheria, and abscess-formation are good examples. This may be of real value in helping one to make a diagnosis in a case with obscure symptoms where possibly deep-seated suppuration may be present. I remember in this connection examining a supposed case of chlorosis, where a distinct leucocytosis was found, 27,500 per c.mm., and where the anaemia was traced to septic poisoning after an abortion. In pneumonia, from 20,000 to 30,000 is quite a common count, and indicates the reaction on the part of the system to the infection. A mild infection may call forth little leucocytosis, while a sharp and sthenic attack usually shows a marked one. Here it is that the count may be of use to us in prognosis, for if there be a sharp attack with a low leucocyte count, it argues, as a rule (I do not say always), a poor reaction on the part of the patient. A somewhat striking instance of this (which might, of course, be a mere coincidence) came under my notice last year. A man had a tolerably sharp attack of pneumonia, and the blood examination showed a poor leucocyte count, only 5,000 per c.mm. On meeting his medical man next day, I said half jokingly, "I give a bad prognosis for your pneumonia case." His reply was, "The man is dead !"

Before leaving this part of the subject, let me in conclusion refer to the value of the leucocyte count in the differential diagnosis between enteric fever and tubercular meningitis. We all know how difficult it may be to give a positive opinion in doubtful cases of these diseases. In their early stages, they may simulate each other very closely, and valuable as Widal's reaction undoubtedly is, I think it should always be supplemented by counts of the white cells, which can be done quickly and easily. In typhoid, one rarely finds any increase in the leucocytes ; I have never found more than 8,000, and usually a smaller number. In tubercular meningitis, on the other hand, I have always seen a leucocytosis, whether the case was examined early or late. In the last three typical cases I saw, the counts were respectively, 16,000, 17,000, and 26,200 per c.mm. In the last case, the patient, a child, was actually in a typhoid ward ; but I had little hesitation in expressing the opinion that it was not enteric fever, but tubercular meningitis from which she was suffering (which turned out to be the case.)

3. *Estimation of hæmoglobin.*—This is commonly done, in this country, by Gowers' hæmoglobinometer; the instrument of v. Fleischl is also sometimes used, as well as that recently devised by Oliver, of Newcastle. All of them depend on a comparison of the tint of the blood under observation with that of a standard blood solution of known strength. A perfectly healthy blood should theoretically show 100 per cent of hæmoglobin; but out of over 100 examinations of this kind, I have never met with a case, even in health, giving a percentage above 95. The lowest result obtained was 12 per cent, in a case of pernicious anæmia. It is in chlorosis that we find the hæmoglobin notably diminished, the number of red cells being but little affected. In pernicious anæmia, again, while the hæmoglobin is much lowered, the red cells are still more so, and we have the curious result that each corpuscle contains more hæmoglobin than in health. Lastly, in secondary anæmia the coloured corpuscles and the colouring matter are diminished *pari passu*.

4. *The blood platelets.*—These are minute pale yellow discs, numbering from 250,000 to 300,000 per c.mm. They may be studied by diluting a drop of blood with Hayem's solution, which contains bichloride of mercury, sodium chloride, and sodium sulphate.

They are of some importance as a source of the fibrin ferment, which has been termed *thrombin*, and which converts the fibrinogen of the blood plasma into fibrin. These platelets have been found altered in number in certain diseases, being increased, for example, in leucocythæmia and diminished in pernicious anæmia. My personal knowledge of this part of the subject is, however, slight.

5. *Specific gravity.*—Over sixty observations were made by me on this point, chiefly with a view to determine the relation of the specific gravity to the hæmoglobin value. Various methods are in use for this form of blood examination—*e.g.*, Schmaltz's, where a measured quantity of blood is weighed in a capillary tube, and Hammerschlag's, which is the process I have followed. In it a mixture of benzol and chloroform is used, into which a drop of blood is introduced by a dry, clean pipette. The blood drop retains its spherical form in this mixture, and rises or sinks according as the mixture is too dense or the reverse. The density is increased or diminished by the addition of chloroform or benzol till the blood



drop remains stationary. It must then possess a density similar to that of the mixture, and this being ascertained by a sensitive urinometer, we have the specific gravity of the blood.

The specific gravity of blood varies essentially with the hæmoglobin (except in cases showing dropsy), and it has been proposed to utilise this fact for the determination of hæmoglobin instead of employing the ordinary methods, which depend upon the colour sense. Hammerschlag and Schmaltz have both constructed tables showing how much hæmoglobin corresponds to a given specific gravity, but, as a result of nearly sixty double observations on this point, I cannot convince myself that this method is likely to be of much use. The normal density of blood in the healthy male adult varies from 1,057 to 1,060, while in women it is 1,054 to 1,057. Out of the cases examined, the lowest recorded was 1,035, corresponding to 15 per cent of hæmoglobin, while the highest was 1,060 (94 per cent).

6. *Coagulation-time of blood.*—I have personally made very few observations on the coagulability of the blood, though the subject has received full notice at the hands of various investigators, and notably from Professor Wright, of Netley, who has devised a simple and efficient coagulometer. The instrument consists of a set of thick glass tubes, with a calibre of one-hundredth of an inch, which are first warmed and then filled in succession with blood by aspiration or capillarity. At intervals of, say, thirty seconds, an attempt is made to blow the blood out of the tubes, and when at length a tube is found in which this cannot be done, the time is ascertained which has elapsed since that particular tube was filled. This is named the coagulation-time, and in health is about four minutes. It is lengthened in hæmophilia, jaundice, and in certain other blood conditions where there is a tendency to blood extravasations, such as purpura and scorbutus. Now, we know that for the coagulation of blood, just as for the curdling of milk, lime-salts are absolutely essential, and it has therefore been suggested that, in the class of cases I have mentioned, calcium chloride, in doses of 5 to 20 grs., might be given for a few days, to increase the rate of coagulation. Professor Wright claims to have obtained good results from this, and it appears to me to be a therapeutic procedure worthy of further consideration.

7. *Alkalinity of the blood.*—The blood is always alkaline, but its degree of alkalinity varies occasionally in disease, tending to be diminished in such conditions as chlorosis, leucocythæmia, and acute rheumatism. The simplest clinical method of determining it is by means of Haycraft's graduated test-papers, but objections have been raised against this by competent observers. My own experience in this field has been very small.

8. *The reaction of diabetic blood to aniline dyes.*—Bremer, in 1896-97, published papers drawing attention to the fact that if films of diabetic blood were made, along with control films of healthy blood, and these films dried and kept at a temperature of 135° C. for five minutes, and thereafter stained in, let us say, a 1 per cent aqueous solution of Congo red or methylene blue, it would be found that the diabetic blood would not stain, whereas the healthy blood would. This I have been able to corroborate from my own observation. Again, Williamson showed that if a weak (1 in 6,000), watery solution of methylene blue, alkalinised with caustic potash and warmed, were treated with diabetic blood, the colour would change to a yellowish-green, whereas with normal blood it would remain of a greenish-blue tint. I have tried this with various diabetic patients, and always found it positive. This has been corroborated on a large scale quite lately by Müller, Luccibelli, and other observers.

In conclusion, let me say that I have made no attempt here to deal with this large subject in an exhaustive manner. There is much more that could be said did time permit, and I have had to omit many points of interest, including the whole subject of serum-diagnosis. But I hope that what has been said may stimulate your interest in a very fascinating and important method of clinical diagnosis, a method which, I am convinced, will very shortly come into great prominence, and which will, I feel sure, yield results of extreme value.

CURRENT TOPICS.

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DINNER IN HONOUR OF SIR WILLIAM TENNANT GAIRDNER, K.C.B., F.R.S.—On Tuesday, the 19th June, 1900, in the Windsor Hotel, Sir William T. Gairdner, who is shortly leaving Glasgow to reside in Edinburgh, was entertained at dinner by a large gathering of his colleagues and friends. In all, one hundred and forty gentlemen sat down to dinner, and the assembly was in every respect a most representative one, including many of his colleagues, large numbers of his professional brethren in Glasgow and throughout Scotland, and not a few leading citizens, including the Lord Provost of the city and the Sheriff of Lanarkshire. In the course of his impressive speech the guest of the evening admitted that he did need some comfort in the situation in which he was placed, and certainly if there is any consolation to be found in the universal desire of a large assemblage to give free expression to its sentiments of affection and honour, then Sir William Gairdner should have been abundantly comforted on the evening of the 19th June last. To the most unobservant it must have been clearly evident that the entire assembly was bent, as one man, upon doing him honour. The warmth of the welcome he received upon entering the reception room, the manifest approval with which the audience listened to the various references to his long and honourable career, and the rapt attention which his own address excited, must all have been highly consoling to the old physician on the eve of laying down his armour after having fought a good and noble fight. The occasion, indeed, was one which will not be easily forgotten by any who was privileged to be present. The older men enjoyed the satisfaction of witnessing the spontaneous and whole-hearted recognition of personal worth and life-long unselfish labour. The younger physicians had their ideals heightened, their courage renewed, and their motives purified by the words of wisdom which fell from their beloved teacher's lips. He earnestly desired to say something which might be of practical service to his hearers, and he certainly succeeded. To the truly great and simple spirit, the conviction of failure is ever more intense than the assurance of success. It is the good which comes unsought and unexpected that gives the purest satisfaction. It is the pursuit of high ideals rather than carping criticism and envy of the success of others that brings the truest happiness. It is the conscious-

ness of work well done, and with singleness of heart, that is the highest reward of a life of effort. Such were some of the thoughts which animated the speech of the guest of the evening, and their influence will long be felt.

Principal Story occupied the chair, and proposed the health of Sir William Gairdner. "The Imperial Forces" was given by Sir James Marwick, and responded to by Dr. Beatson in an eloquent speech. "The Medical Profession" was proposed by Sheriff Berry, and Sir William Turner, President of the General Medical Council, replied in a speech of great vigour and eloquence. To Sir Hector Cameron was entrusted the toast of "The Corporation," and this was duly acknowledged by Lord Provost Chisholm.

The following gentlemen were present:—

The Lord Provost; David C. Gairdner, Esq., Kilmarnock; Dr. L. R. Sutherland, Dundee; John Ure, Esq., LL.D., Helensburgh; Sir William Turner, Dr. Yellowlees, J. O. Mitchell, LL.D., Dr. Davidson, Shettleston; Dr. Edington, Dr. J. K. Kelly, Dr. Barlow, Rev. Dr. Strong, Dr. G. S. Middleton, Dr. Napier, Dr. Freeland Fergus, Dr. Monro, Dr. James W. Wallace, Professor M'Call Anderson, Dr. Maitland Ramsay, Dr. Tennent, Sir Hector Cameron, Dr. Renton, Dr. J. Wallace Anderson, Dr. J. Fergus, Sir J. D. Marwick, Mr. A. E. Maylard, Alex. Small, Esq., M.A., Tollerross; C. D. Gairdner, Esq.; Dr. John Alexander, Dr. Rutherford, Professor Robert Muir, Dr. J. Finlayson, Dr. James Wallace, Greenock; Dr. R. Barclay Ness, Dr. James Carslaw, Dr. John Burns, Dr. D. N. Knox, John D. Tennent, Esq.; Dr. W. K. Hunter, Dr. J. G. Andrew, Dr. Mackintosh, Dr. Glaister, Dr. William Wallace, Dr. Sinclair, Dundee; Dr. James Paton Boyd, Dr. John Adams, Dr. James Hinshelwood, Dr. A. K. Chalmers, Dr. Frew, Kilmarnock; Dr. Stevenson, Innellan; Dr. Campbell Syme, Kilmalcolm; Professor William Jack, Thornhill; Dr. Rees Price, Dr. Joshua Ferguson, Paisley; Dr. R. W. Forrest, Sheriff Berry, Dr. Samson Gemmell, Dr. Newman, Henry Johnston, Esq., Pollokshields; Dr. G. T. Beatson, Dr. Anderson, Dr. M'Gregor Robertson, Dr. J. S. M'Kendrick, Dr. Thomas Graham, Paisley; William A. Smith, Esq., Edinburgh; Dr. J. H. Nicoll, Dr. Thomas Watt, Paisley; John James Burnet, Esq.; Dr. James Laurie, Greenock; Dr. Bruce Goff, Bothwell; Professor M'Kendrick, Dr. D. C. M'Vail, Robert Brodie, Esq.; Dr. Sewell, Helensburgh; Dr. D. Macphail, Coatbridge; Dr. James Parker, Kilmalcolm, Dr. Oswald, Gartcosh; Dr. Taylor, Dr. Millar, Dr. Arch. Brown, Dr. James Brown, Alexandria; Dr. Alfred Young, Principal Story, Dr. Dougan, Dr. James Duncan, Peter Macleod, Esq.; Dr. Rowan, Dr. P. A. Grant, Dr. Livingston Loudon, Hamilton; Dr. M'Knight Wilson, Dr. J. D. McLaren, Dr. Arch. Neilson, Dr. M'Calman, Dr. J. Lindsay Steven, Rev. J. Edgar, Milngavie; Dr. James Adams, David Johnston, Esq., Dr. Kirk, Dr. Duncan, Professor Stockman, Dr. Dunlop, Dr. Macdonald, Dr. Somerville, Dr. Ferguson, Dr. Steel, Dr. Grant, Blantyre; Dr. Fraser, Paisley; Dr. Muir, Dr. Arthur, Airdrie; Dr. Webster, Dr. John M. Smith, Dundonald; Bailie Dickson, Dr. W. R. Jack, Dr. John Goff, Bothwell; Dr. Campbell M'Clure, Dr. Alex. Johnston, Dr. George Jubb, Dr. Gilson, Dr. Duncan, Dr. R. M. Buchanan, Sir James King, Bart, Professor Stewart, Dr. Core, Dr. Kerr, Dr. Hutton, Professor Bower.

Apologies for absence were received from the following gentlemen:—

James Gairdner, Esq., C.B., London ; Lord Lister, Sir John Kirk, Dr. J. B. Russell, Professor George Buchanan, Rev. Dr. Tulloch, Rev. Dr. Dickson, Rev. Dr. Donald Macleod, Dr. Byrom Bramwell, Edinburgh ; Dr. Miller, Dundee ; Dr. W. J. Fleming, Dr. Alex. Robertson, Dr. Samuel Sloan, Dr. John Edgar, Dr. W. L. Reid, Dr. D. Fraser Harris, St. Andrews.

**WESTERN INFIRMARY.**—The following appointments have been made:—*Dispensary physicians*, Dr. Hugh Galt and Dr. James Carslaw. *Dispensary surgeons*, Dr. John Morton and Dr. G. H. Edington. *Extra dispensary physicians*, Dr. Alfred Webster and Dr. John S. M'Kendrick. *Extra dispensary surgeons*, Dr. Farquhar Macrae and Dr. Alex. M'Lennan.

**BELVIDERE FEVER HOSPITAL.**—Dr. John Brownlee has been appointed Physician-Superintendent in room of Dr. Alex. Johnston, now of Ruchill Hospital.

**THE GLASGOW SOUTHERN MEDICAL SOCIETY.**—The annual pic-nic of this Society took place on Thursday, 21st June, to Alloa and Culross, on the shores of the Firth of Forth. The members, of whom there was a large attendance, left Buchanan Street station at 10:30 A.M., and reached Alloa fully an hour later. Here, among other sights, the Society visited the brewery of George Younger & Co., and great interest was manifested in the various stages of the malting process which ultimately leads to the formation of the favourite beverage. At the conclusion of this inspection, the members proceeded in brakes to the ancient and antique town of Culross, passing *en route*, and in splendid weather, the old tower of Clackmannan, the village of Kinnet, and Kinnet House, the residence of Lord Balfour of Burleigh. Farther on, the members greatly enjoyed the drive through the fine policies, first, of Tulliallan, the seat of the Marquis of Lansdowne, and then of Dunimarle Castle, one of the houses of the Earl of Elgin. Luncheon was partaken of in the Dundonald Arms, Culross, at the conclusion of which a ramble was made through the old town, and visits were paid to the cave of St. Serf, the chapel dedicated to St. Mungo, Culross Abbey, Bishop Leighton's Tower, and the unique Crown of the Causeway. Returning to Alloa, the members dined in the Victoria Hotel, after which the party entrained for Glasgow about 7 P.M., having spent a profitable and most enjoyable day.

LITTKE'S HUNGARIAN CHAMPAGNE (SANS SUCRE): LITTKE'S HUNGARIAN CHAMPAGNE, EXTRA SEC, 2 PER CENT LIQUEUR (Ingram & Royle, Limited, London).—The production of champagne is not confined to the famous Champagne district of France. Messrs. Littke grow immense quantities in Hungary, and the characters of the specimens now submitted are such as to commend them to the taste of English consumers. The variety entitled "sans sucre" is exceedingly dry, containing only .1 per cent of sugar, and being therefore reasonably enough described by the dealers as anti-diabetic. The other variety is distinctly sweeter to the taste, containing as it does 1.5 per cent of sugar, and has 2 per cent of liqueur added to it. According to an analysis carried out in the *Lancet* laboratory, the "sans sucre" wine contains alcohol to the extent of 9.36 per cent by weight, or 11.61 by volume, while the sweeter champagne has 11.23 per cent by weight, or 13.90 by volume. It would appear, therefore, that where champagne is indicated, satisfactory results might be anticipated from the use of these Hungarian wines grown by Messrs. Littke, and we have found on trial among hospital patients that this champagne is a very acceptable medicine.

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## MEETINGS OF SOCIETIES.

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### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

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SESSION 1899-1900.

MEETING III.—3RD NOVEMBER, 1899.

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*The President, MR. H. E. CLARK, in the Chair.*

#### I.—CASE OF PRIMARY SARCOMA OF THE TONSIL: SUCCESSFUL EXTIRPATION THROUGH THE MOUTH.

BY DR. WALKER DOWNIE.

The first patient whom I desire to show you to-night is a woman, aged 58 years, from Alloa. I saw her on the 17th August, 1899, when she complained of a swelling of her right tonsil, which had been slowly increasing in size since the beginning of the present year.

Early in January she first had a sense of fulness and discomfort in her throat, particularly on swallowing. It came on without any apparent cause, and at first gave her no concern. She used gargles of borax, vinegar, and the like; but the discomfort persisted, so she consulted a doctor in March, who informed her that the tonsil was inflamed and ulcerated, and he prescribed an astringent solution, to be painted over the tonsil. The tonsil was at this time evidently enlarged, and she had some difficulty in swallowing. There was no sharp pain, and she was able to take both fluid and solid food freely. She continued to apply the astringent referred to till June. During these three months she not only felt no local improvement, but was convinced that the affected tonsil was slowly increasing in size; and also she felt that she was losing flesh, and becoming so weak generally that she was quite unable to perform her ordinary household duties.

In June she consulted another doctor, who proposed to excise the affected tonsil, but on her return two weeks later to have this done the tonsil was found to have increased so much in size in that interval that he deferred operation.

She called on me with a note from her doctor on 17th August, by which time there was no doubt as to the nature of this new growth.

Her temperature was normal. She appeared to be in moderately good health, though complaining of weakness and exhaustion on slight exertion. Her speech was somewhat thick, and she complained of pains shooting up from the right side of the throat to the right ear. She could swallow with comparative ease.

On examination through the mouth, a tumour occupying the position of the right tonsil was seen, somewhat resembling a hypertrophied tonsil. It was barely the size of an average walnut, it had the form of an enlarged tonsil, and was of a deep red colour, with several greyish patches of superficial erosion distributed over its surface. It was firm to the touch, non-fluctuant, and palpation caused no pain. The faucial pillars were not adherent to the tumour, which was, as a consequence, freely movable, and the lymphatics in the neighbourhood were unaffected.

She was admitted to the infirmary with the least possible delay, and on the 23rd of August she was operated upon by me under chloroform.

The removal of the tumour was carried out through the widely opened mouth, and the growth was enucleated by the

finger-nail and scissors. Firm pressure over the raw surface checked what bleeding there was. Ice was given frequently for the first few hours after operation, and thereafter small doses of dilute hydrochloric acid was administered several times daily until the parts were healed.

Swelling and ecchymosis of the faucial pillars on the right side followed the operation; but this rapidly subsided, and the patient was dismissed on 2nd September with the parts completely healed.

Dr. A. R. Ferguson, who cut and examined sections of the tumour, reported that the growth was a spindle-celled sarcoma. "The cells," he wrote, "are large, uninuclear, and spindle-shaped," and, in addition, "there are numerous very irregular large rounded cells. An infiltration of the remaining tonsillar tissue, with their cells, singly or in small groups, is also observed."

It is now two and a half months since the operation, and you will see that the parts are healed, that the contour of the fauces has been in no way altered—the two sides are symmetrical—there is no trace of the former growth nor of the operation performed for its removal; there is no recurrence, and the patient is in excellent health.

There were two reasons which prompted me to show this patient and the tumour. The first is to give a word of warning, and the second is to enable me to give a word of encouragement. The first, then, is to emphasise the fact that the tonsil not only may be, but is, the site of malignant disease, and that more frequently than is usually supposed. I have on former occasions referred to other cases which I have seen, all of which had in the earlier stages been looked upon, and treated as, cases of simple subacute inflammation of the tonsil. And so long as the belief exists that the tonsil is seldom attacked by, and is still more rarely the starting-point of, malignant disease, will this mistake occur. In the case of sarcoma, new growth may closely resemble an inflamed hypertrophied tonsil, but with it there is less pain, and rarely any acute pain, which, on the other hand, is always present when the tonsil is inflamed. Then sarcoma does not run the course of an acute or subacute tonsillitis, and end in resolution or suppuration; but it continues slowly to increase in size, and the patient's health the while becomes affected, as shown by lassitude, loss of flesh, and impairment of strength.

In two other cases, one of which I have already published, each was sent to me to have a supposed tonsillar abscess opened.



The second reason, which contains the word of encouragement, has regard to the nature of the new growth. The tumour in this case, as stated by Dr. Ferguson, was of the spindle-celled variety. This variety of tumour may, as pointed out by Dr. Newman in his book on *Malignant Diseases of the Throat and Nose*, remain encapsuled for a considerable period, and the glands remain unaffected. Thus, if the tumour is recognised while it is still encapsuled, and it be at once enucleated, there is every hope that that operation will effect a cure.

In the case before us to-night, the tumour appears to have been in existence for at least eight months; and even at the end of that long period it remained encapsuled and the lymphatics unaffected, a condition which permitted of its successful extirpation.

*Mr. Clark* was not unfamiliar with sarcoma of the tonsil. Some time ago he had removed one from a man, who lived for at least five years afterwards, and possibly for some years more, for he had quite lost sight of him.

## II.—CASE OF PRIMARY PEDUNCULATED SARCOMA OF THE TONGUE.

BY DR. WALKER DOWNIE.

Matthew C., a mechanic, aged 34, was referred to me by Dr. Gilmour, of Duntocher, and first seen by me on 17th March, 1899, when he gave the following story of his illness:—

Five weeks ago his throat became sore; he felt feverish, and had considerable pain and some difficulty in swallowing. He supposed the discomfort to be the result of a "cold," and he made hot applications to his neck at intervals for one week. These gave him no relief, and, as he felt unfit for work, he consulted his doctor, who, while examining the throat, discovered the presence of a swelling over the posterior aspect of the tongue. A gargle was prescribed, and during the second week of illness the pain in the throat became less severe, and he could swallow more readily. At the end of the second week the swelling "burst," when a quantity of blood, and blood only, was discharged. A few days later, though still feeling ill and weak, he returned to work. Towards the end of the third week the swelling was larger, and appeared to fluctuate on palpation, and his doctor incised it. Free

bleeding followed the incision, and the patient thought that the size of the swelling, of the presence of which he was now conscious, was lessened. Shortly after this, however, the throat again became inflamed and sore, and, while there was no interference with respiration, deglutition became almost impossible. Poultices were applied, and again the pain and difficulty in deglutition subsided, so that he could partake of even solids without discomfort. During those three weeks, however, he had been conscious of gradually increasing weakness and loss of flesh. One week before presenting himself at the hospital he had had a rigor, followed by profuse perspiration, which slowly passed away, leaving him, however, more enfeebled.

On 17th March, when first I saw him, he had no difficulty in swallowing, and he could breath freely. His voice was clear, but his speech was thick, and resembled that associated with hypertrophy of the faucial tonsils. He felt feeble, a short walk having exhausted him. His temperature was 98·8° F.; his pulse, 80; and he stated that during the past five weeks he had lost 2 stones in weight.

*Examination.*—With the mouth widely opened, and tongue on the floor of the mouth, the tumour had the appearance of a smooth swelling of the left side of the dorsum of the tongue, and it was the more readily noticeable as it was smooth and free from fur, while the surface of the tongue generally was thickly coated. When the tongue was protruded, the growth was caused to rise, and its full size and relationships could then be observed. It sprang from the centre of the left half of what may best be described as the post-circumvallate area of the base of the tongue (that part of the base of the tongue situated behind the line of the circumvallate papillæ). The size of the tumour was considerably larger than a walnut, its surface was smooth and shining like the palate, and its colour was similar to that of the palate. There was a small protrusion or outgrowth on its upper aspect, marking, I think, the site of the incision referred to.

The tumour was firmly attached to the tongue, although the area of attachment appeared to be only about one-half of the circumference of the growth. It was thus pedunculated, and, as a consequence, it was freely movable in all directions. When the tongue was protruded, the tumour filled up the greater part of the faucial isthmus, and its upper border lay in contact with the soft palate; and when the tongue was withdrawn into the mouth, the bulk of the tumour fell back

and lay in the glosso-epiglottic fossa. On palpation, the growth was found to be highly elastic, and near to its upper border the sensation conveyed so closely resembled that of fluctuation that, to eliminate any possibility of doubt, a fine trocar was introduced, through the cannula of which blood alone escaped.

There was absolutely no glandular enlargement, though there was a slight fulness below the angle of the jaw on the right side, due to a chronic hypertrophy of the right tonsil.

There was here, then, a large elastic tumour of rapid growth, with rapid systemic involvement, resulting in general prostration and serious emaciation, with absence of glandular implication, all of which pointed to sarcoma, and I resolved to excise the growth without delay.

On 22nd March the patient was placed under chloroform, the left cheek was split by an incision extending from the angle of the mouth to the edge of the masseter muscle. A stout ligature was passed through the tongue, by which that organ was drawn well forward; but even firm traction on this did not raise the growth into the mouth, so a second ligature was passed through the body of the growth, and by this means it was brought well into view and within reach.

The portion of the tongue from which it sprang was removed along with the growth, the cutting being done by means of scissors; and the incision, elliptical in form, included a wide margin of tongue tissue. No secondary nodules were found, and the cavity in the tongue was closed by numerous silkworm sutures. The incision through the cheek was closed by a double row of sutures, the mucous surface with horse-hair, and the skin with silkworm gut. A cyanide iodoform dressing was applied externally; small pieces of ice were given to suck, and a boric acid mouth-wash used freely. On the following morning his temperature was 101° F. He indicated that he could not swallow, and he was given 20 oz. of peptonised milk through a stomach-tube. Later on in the day, while he was cleansing his mouth, he accidentally swallowed some of the boracic solution, and, as this had occurred without causing pain, his fears were allayed, and the tube was not again required. On the second morning after the operation the temperature was normal, and it remained so thereafter. On the fourth morning several stitches were removed from the cheek, this wound having healed by first intention; and three days later all remaining stitches, including those in the tongue, were removed.

On 31st March—that is, nine days after operation—the

patient was sent to a convalescent home, from which he returned at the end of three weeks feeling very well, and having gained in that time  $14\frac{1}{2}$  lb. in weight.

He again reported himself on 23rd May. He was then the picture of health, felt exceptionally well, and had gained  $7\frac{1}{2}$  lb. since last report.

On 14th July he visited the hospital. He had been at work regularly since the date of last report, and there was no evidence of recurrence of the disease. He is now back to his normal weight—namely, a fraction over 10 st.

To-night, you will see that the scar in the cheek is almost imperceptible, and on examination of the tongue you will find a hollow in the left post-circumvallate area, marking the site from which the growth was removed. There is now (seven and a half months after operation) no local discomfort, and there are no evidences of recurrence of the disease. He has been regularly at work since May, he feels fit and well, and his weight, taken to-night, is 10 st. 2 lb.

The tumour after removal weighed 28 grammes; it measured 13 cm. in circumference, and 4.3 cm. from the surface of the tongue to its upper border. The surface of the growth was smooth, with two small outgrowths situated on its upper and posterior aspects, and on section the growth was seen to have a firm capsule.

*Microscopic examination of the growth.*—Under a low power there is seen a well-demarcated tumour, with a tolerably thick fibrous capsule, which at several points throws septa between the lobules of the growth. The capsule is well defined as a whole, but at several points the growth can be seen invading it.

Under a high power the tumour consists of well-defined cells and matrix. The cells are irregularly disposed, in some parts being grouped together in dense masses, while in other parts they are sparsely distributed. The great majority of the cells are spindle-shaped, while of the rest some are round and others oval in form.

With the oil immersion lens the cells are shown to have no cell-wall; they are multinuclear, and present clearly the characters of new-formed cells of the embryonic type.

The matrix presents a delicate structure, in parts fibrillated, in parts reticulated, and in parts punctated. It is rich in vessels with very fine walls.

Contained within the capsule proper there is nothing other than what has been described—no adult fibrous nor muscular tissues.

The capsule, under the high power, presents throughout its thickness stratified connective tissue fibres showing the usual formation connective tissue cells. Invading the inner layer, here and there, can be found spindle-cells of an embryonic type, but these become less numerous as the outer layers of the capsule are reached.

The tissue outside of the capsule presents muscular tissue, separated by fibrous tissue, presenting formative connective tissue cells; but there seems to be no trace of cells of the embryonic connective tissue type.

From these appearances, the only conclusion which can be drawn is that we have here an encapsuled sarcoma of the spindle-celled or mixed-celled type, and that invasion of the capsule had commenced, but that it has not reached the tissues of the tongue.

Primary sarcoma of the tongue is rarely met with. In illustration of this fact, the following quotation, relative to this subject, from Butlin's clinical manual *On Diseases of the Tongue*, published in 1885, may be made. In this book the author makes mention of three cases, none of which he had seen, however, and says—"Even if these cases are admitted to have been true cases of sarcoma, it is still very evident that primary sarcoma of the tongue must be regarded as an exceedingly rare form of tumour, and equally certain that it is quite useless to attempt to write an account of it which shall be useful." Since that date other cases have been put on record, but I do not think the number exceeds thirty in all.

The neoplasm appears under two distinct forms—(a) the interstitial, which is the more common, and (b) the pendulous or pedunculated variety. Of the latter variety, of which the one I show to-night is an example, five cases only appear to have been put on record, and none of these occurred in this country.

Dr. Melchior-Robert, in the *Revue de Chirurgie* for April, 1899, gives particulars of a case of pedunculated sarcoma of the tongue, which is the fifth case of such in order of publication, and he contrasts it with the other four recorded cases. Some of the points in common in those cases of pedunculated sarcoma are:—

1 *Rapidity of growth.*—Of the five cases grouped in Melchoir-Robert's, in his own case, the tumour had been present about two and a half months prior to surgical interference; in another (Mikulicz), three months; in Perman's, four months; in Berger's, six months; and in one only, that

recorded by Mercier, had the growth been present for some years. In the case I have described, the growth, as far as could be ascertained, had been present for five weeks only.

2. *State of the glands.*—Of the five recorded cases, in two only were the glands affected, and in both the enlargement was of a purely inflammatory nature. In my case the glands were unaffected.

3. *Non-recurrence.*—Recurrence after the removal of a pedunculated sarcoma of the tongue appears to be exceptional. In four of those five cases no recurrence had taken place after several years, and this, to me, appears the more astonishing, as the growth of the tumour is usually so rapid.

### III.—TWO CASES OF EPITHELIOMA OF THE TONSIL.

BY DR. JAS. GALBRAITH CONNAL.

CASE I.—Mr. M'L., æt. 61 years, is an ironmoulder to trade. Since May of the present year he has complained of pain in his throat. For this he tried simple remedies, but as he was not improving he consulted his medical attendant, Dr. John Ritchie, who diagnosed the condition as malignant, and asked me to see him.

The right tonsil presented an ulcerated surface, and there was a hard nodule, about the size of a pea, in the adjacent border of the soft palate. The gland at the angle of the jaw was involved. I removed a small piece of the tonsil, and sent it for examination to the West of Scotland Clinical Research Laboratory, and their report stated that the section showed only inflammatory infiltration.

The patient had been asked to come back in a week, but it was nearly two months before he came. He explained that he had been confined to the house owing to an accident. It was noticed now that the ulceration of the tonsil was deeper, and he complained that latterly the pain was very severe.

As the clinical features of the case still indicated malignancy, I removed a larger piece of the tonsil, and again sent it for examination, and this time it was reported as epithelioma.

Shortly after this he entered the Western Infirmary, and Dr. J. H. Nicoll tied the common carotid artery on the right side. It will be interesting to watch if this limitation of the blood-supply to the tonsil will in any way retard its growth.

Regarding the patient's personal history, he states that he has always been a strong man, and that he has never had a day's illness in his life. There is no history of syphilis.

CASE II.—W. M'G., a man, 62 years of age, whom I saw at the Central Dispensary. An interesting point in his case is that he has a large nodular mass on the left side of the neck, which I regard as malignant, while the right tonsil, soft palate, alveolar border, and side of the tongue are extensively ulcerated. A small piece of tissue was removed from the tonsil, and microscopic examination showed typical epitheliomatous growth.

The swelling in the neck was first noticed about seven months ago, while the involvement of the tonsil dates from June of the present year.

Pain, shooting up to the ear, is, and has been, a prominent symptom, while emaciation and loss of strength are well marked. He is an old soldier, and was treated for primary syphilis while in the army about forty years ago.

Dr. Nicoll said that when Dr. Connal sent to him the first patient shown to-night he admitted him to the Western Infirmary, and there, as Dr. Connal had mentioned, ligatured the common carotid artery. This he did with a double purpose. In the event of no further operation being attempted, he hoped the limiting of the blood-supply might retard the malignant growth. In the event of further operation with a view to radical removal of the growth, the previous ligature would lessen the hæmorrhage. The patient ultimately decided that, as no guarantee could be given that removal would prove a complete cure, he should not undergo a radical operation.

In the *British Medical Journal* for 11th September, 1897, would be found a note on "The Collateral Circulation after Ligature of the Common Carotid," which he had communicated to that *Journal*. It had reference to a case of extensive epithelioma of tongue and fauces, in which Dr. Nicoll had first ligatured the common carotid, and, subsequently, ten days later, resected the fauces and tonsil of one side along with the entire tongue. At the latter operation the result of the former ligature was found to be that the common carotid above the ligature, with the external carotid and its branches, were firmly thrombosed, while the internal carotid (by way of the circle of Willis) was fluid and pulsating down to the carotid bifurcation. In another case since, he had had a similar result follow preliminary ligature of the common carotid.

Mr. Clark said that primary epithelioma of the tonsil was more frequent than generally believed; he had seen a good many cases. He would be interested to know the effect of

ligature of the carotid, but it must be remembered that the growth might be slow even without ligature of vessels, as one of his cases showed, where, without ligature, there had been no extension in three years.

IV.—CASE OF COMPLETE TRAUMATIC ANIRIDIA, THE LENS BEING PRACTICALLY UNINJURED.

BY DR. JOHN ROWAN.

J. W., æt. 35, blacksmith, was admitted to the Ophthalmic Institution on 12th July last.

There was a history of his right eye having been struck on 7th July by a piece of steel, three-eighths of an inch square. This struck him so forcibly that he fell down, but the eyelids were not injured. He returned to work next day, though seeing almost nothing with this eye. On the 12th he received a second injury to this eye, a small piece of steel striking it.

On admission, the anterior chamber was seen to be full of blood, and he could only distinguish bright light and shade. There was also a small wound on the upper and inner part of the cornea. The condition gradually improved under treatment, till, on 4th August, R.V.  $\frac{4}{80}$ , and with + 2 D Sph. =  $\frac{6}{24}$ , a fairly clear view of the fundus could be obtained.

*Present condition* (3rd November, 1899).—The eye appears dark in colour, *i.e.*, there being no iris visible, it is all pupil. Vision with this eye =  $\frac{6}{24}$  and J. 8. The small scar is seen on the cornea, as well as the blood-stained opacity on the anterior capsule of the lens.

Ophthalmoscopic examination shows the torn roots of the iris, and the apparently dark margin of the lens, through which are scattered numerous small opacities, also, the so-called ligament of the lens. The fundus is clearly seen.

This case was demonstrated by means of a corneal microscope, kindly lent the author by Dr. Ramsay.

V.—NOTES ON CLINICAL GYNÆCOLOGY.

BY DR. J. M. MUNRO KERR.

Dr. Kerr's paper appears as an original article at p. 18.

In reply to Dr. Nicoll, *Dr. Kerr* explained that the hæmorrhage in Case III was chiefly from the abdominal wall, and that he sutured the colon with fine, and the uterus with coarser, silk.



## MEETING IV.—17TH NOVEMBER, 1899.

*The President, MR. H. E. CLARK, in the Chair.*

## I.—CASE OF LEUCOCYTHÆMIA (SPLENO-MEDULLARY FORM).

BY PROFESSOR M'CALL ANDERSON.

The patient was a married woman, aged 30, who was admitted under Professor Anderson's care on 22nd October, complaining of a swelling in the abdomen of a year's duration. She had five children, all living and healthy. Her mother still survived in good health, but her father had died of some chest affection. Patient suffered from scarlet fever in infancy. After the birth of her last child, two years ago, she was confined to bed for six weeks owing to pain about the left side, where the swelling now is. This pain eventually disappeared, and she regained her usual health, but menstruation has not occurred since.

She became aware about a year ago of a gradually increasing swelling in the left side of the abdomen. She thought she had lost colour, and she had sometimes had palpitation at night. She thought she was pregnant. Digestion had been good, though the bowels were constipated. There had been no epistaxis, or deafness, or enlargement of glands. Patient had never noticed any swelling of the legs. She complained of a burning sensation on micturition, and the urine had been dark in colour. The urine on admission was acid in reaction, with a specific gravity of 1020; it contained a trace of albumen, but no sugar. A few minute hæmorrhages were present in the retinæ, and especially in that of the left eye. The hepatic dulness measured 5 inches.

Points of special importance in the diagnosis were the weakness, emaciation, and anæmia; the enormous splenic enlargement; the absence of any enlargement of lymphatic glands; the retinal hæmorrhages; and the results of the examination of the blood.

The treatment had included rest and the administration of bone-marrow, and afterwards of spleen tabloids.

*Dr. Alex. Robertson* referred to cases where the treatment had consisted of the administration of arsenic and bone-marrow, and to two others where the spleen had been excised.

In none of these had the methods of treatment proved encouraging.

*Mr. Clark* said that the question of operation for removal of the spleen should be determined by the nature of the disease. If the spleen only were involved, it might be excised; but if other organs were implicated, no operation should be undertaken.

*Dr. W. K. Hunter* said he had examined the blood of a similar case some two years ago, and had found numerous micro-organisms in all the specimens examined. He had, however, not succeeded in obtaining a growth on any of the ordinary culture media. Possibly the organisms were saprophytic, and had no causal relationship to the disease.

*Professor Anderson* replied.

## II.—PATIENT SUFFERING FROM DISEASE OF THE SPINAL CORD.

BY PROFESSOR M'CALL ANDERSON.

Professor Anderson showed a patient who had been admitted to his wards some weeks before suffering with ataxic symptoms, and who had made a rapid recovery under treatment with large doses of iodide of potassium.

*Dr. Robert Kennedy* said he had seen a similar case a year ago, where, in a short time, the ataxic symptoms had disappeared under 5-grain doses of iodide of potassium.

## III.—CASE ILLUSTRATIVE OF THE VALUE OF THE EYE SYMPTOMS IN THE DIAGNOSIS OF TABES IN THE PRE-ATAXIC STAGE.

BY DR. JAMES HINSHELWOOD.

The diagnosis of locomotor ataxia is easy when the characteristic ataxic gait has manifested itself. Frequently, however, the diagnosis can be made with perfect certainty before the slightest ataxia is present, if the other symptoms are correctly observed and interpreted. The eye symptoms are of very special importance from this point of view, as they occur in a large percentage of cases at a very early stage of the disease. Not infrequently they are the very first symptoms which obtrude themselves on the notice of the patients, and make them consult the ophthalmologist. Hence, in the Eye Infirmary, we frequently have opportunities of seeing cases of

tabes at the very earliest stage of the disease, before any obtrusive spinal symptoms have developed, such as would send the patient to consult a physician.

The following case is an admirable illustration of the very early occurrence of eye symptoms, and of their importance in the diagnosis of locomotor ataxia:—

W. C., æt. 45 years, a labourer, presented himself at the Charlotte Street branch of the Eye Infirmary on 3rd June, 1899, complaining of double vision. On examination, the diplopia was found to be due to paralysis of the third cranial nerve, all its branches being involved. There was therefore ptosis, external strabismus, and a dilated immobile pupil. Knowing from experience the frequency with which paralysis of the ocular muscles occurs in the early stage of tabes, I, as a matter of routine, always test the pupillary reflexes. I found that the Argyll-Robertson pupillary phenomena were present. I found, also, the absence of Westphal's pupil phenomena, the new symptom which has recently been described by him. When the patient attempts forcibly to close the lids, which are held open by the observer, in health the forcible effort to shut the lid is accompanied by a narrowing of the pupil. In tabes it is found that this contraction of the pupil does not occur. Westphal has found this pupillary phenomenon also absent in other conditions than tabes, such as general paralysis and syphilis of the central nervous system. Though not pathognomonic, it is a valuable confirmatory sign in the presence of other symptoms of tabes. On examination with the ophthalmoscope, there was found a well-marked optic atrophy in both eyes; and on perimetric examination, a characteristic concentric contraction of both visual fields was found to be present.

The eye symptoms alone, therefore, led to the diagnosis of locomotor ataxia. The ocular palsy, the Argyll-Robertson pupillary phenomena, the absence of Westphal's new pupil phenomenon, the optic atrophy, and the concentric contraction of the visual fields, formed a collocation of eye symptoms such as pointed in the most definite manner to locomotor ataxia.

On examination of his knee-jerks, these were found to be present, and on the most careful examination no ataxia could be made out. We know that the eye symptoms may be fully developed before any spinal symptoms manifest themselves, but in this case there were present shooting pains in the lower limbs of nearly a year's duration, which no doubt

were the earliest symptoms of the involvement of the spinal cord. These had been regarded and treated as rheumatic, as is usually the case. There was a history of a chancre twenty years ago, but no history of subsequent symptoms.

The patient was put upon specific treatment, which, however, was only carried out in a somewhat spasmodic and irregular manner.

There was a rapid improvement of the paralysis of the third nerve, and by 20th September all traces of it had disappeared. I did not, however, attach too much importance to its disappearance, as we know that the ocular palsies in the early stage of tabes are often of a transient character, and disappear without any treatment whatever.

When the patient was examined at the beginning of November, it was found that the knee-jerks were entirely lost. No ataxia, however, could yet be made out. The complete loss of the knee-jerks confirms, in the strongest manner, the diagnosis which had already been made, six months before, from consideration of the eye symptoms alone.

In February, 1896, I demonstrated before the Medico-Chirurgical Society a case of tabes, with characteristic eye symptoms and without ataxia, but with the knee-jerks completely lost. I have seen at the Eye Infirmary many such cases, as characteristic eye symptoms are very frequent in the pre-ataxic stage; but in the present case the patient was seen at a still earlier stage, before the knee-jerks were affected. The only symptom pointing to involvement of the cord, when first seen, was the darting pains in the legs, the subsequent development of the loss of the knee-jerks amply confirming the accuracy of the diagnosis. This case, and the one shown by me three years ago, fully illustrate the value of the eye symptoms in the early diagnosis of this condition.

It is evident that an early diagnosis, before extensive changes have taken place in the cord, will afford a more favourable opportunity of influencing the progress of the disease by treatment. This, I think, is of special importance in cases with a syphilitic history, where there is reasonable hope of effecting something by energetic treatment if the disease is diagnosed at a sufficiently early stage.

In the present case the disease has evidently progressed in spite of the treatment. This, however, does not invalidate what has just been said, as, in the first place, the treatment has not been carried out with regularity and thoroughness owing to the carelessness of the patient; and, in the second

place, it is by no means certain that it is of syphilitic origin, there being a history of a sore on the penis, but of no further symptoms.

IV.—CASE OF EPITHELIOMA OF THE OESOPHAGUS INVOLVING THE PNEUMOGASTRIC NERVE WITH ITS RECURRENT BRANCH ON THE RIGHT SIDE, AND WHERE THE SYMPTOMS CLOSELY POINTED TO ANEURYSM OF THE ARCH OF THE AORTA.

By DR. J. SOUTTAR M'KENDRICK.

Dr. M'Kendrick's paper appears as an original article at p. 23.

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MEETING V.—1ST DECEMBER, 1899.

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*The President, MR. H. E. CLARK, in the Chair.*

I.—CASE OF MYOCLONUS MULTIPLEX.

By DR. GEO. S. MIDDLETON.

Dr. Middleton's paper appears as an original article at p. 11.

II.—CASE OF UNUSUAL OCULAR PARALYSIS.

By DR. FREELAND FERGUS.

Dr. Fergus related the main facts of a case where there was complete immobility of one eyeball. The condition, as far as could be ascertained, dated from birth. There was no growth in the orbit to cause fixation of the eyeball, and the pupil reflexes were normal.

*Dr. Monro* said that the case reminded him of some similar cases recorded by Gowers where the ocular paralysis was thought to be due to a rheumatic affection of the ocular nerves at a point where they entered the ocular muscles.

*Dr. Leslie Buchanan* considered it more likely that the immobility of the eyeball was due to congenital absence of some of the ocular muscles.

## III.—TWO SPECIMENS OF STRICTURE OF THE LARGE INTESTINE.

BY MR. R. H. PARRY.

CASE I.—*Scirrhus carcinomæ of hepatic flexure of colon removed from a patient, æt. 56, after a preliminary right inguinal colotomy had been performed for relief of symptoms of acute obstruction.*

Mrs. M.K. was sent to the Victoria Infirmary on 7th August, 1899, by Dr. Murray Young, Hamilton, as a case of acute intestinal obstruction. Patient enjoyed good health until three weeks before admission, when the bowels became obstinately constipated. Purgatives and enemas were tried with varying success. The appearance, however, of fæcal matter in the vomit, and the rapid progress of the abdominal symptoms, indicated that operative measures were urgently called for.

On examination, the abdomen was seen to be greatly distended, and it was also tympanitic and somewhat tender all over. Peristaltic movements were visible, and the accompanying spasms caused much suffering. Examination *per rectum et vaginam* gave no clue as to the seat of the obstruction.

In consideration of the age and the general condition of the patient, the great distension of the bowel, and the probability of the obstruction being a malignant tumour involving the large bowel above the rectum, it was decided to do, in the first instance, a palliative operation; accordingly, right inguinal colotomy was performed. An incision,  $1\frac{1}{2}$  inch in length, was made through the skin, about an inch above the outer half of Poupart's ligament, and the muscles separated, not divided. The cæcum was fixed to the skin by a few catgut stitches, opened, and a drainage-tube inserted, through which much gas and fæcal matter escaped. The rubber tubing, which was about the diameter of the index-finger, measured about 8 inches in length,  $1\frac{1}{2}$  inch of which lay in the lumen of the bowel, while the outer end was received into a jar, and was maintained in position by means of two safety pins passed through it close to the wound, which again was fixed to the skin by two stitches. The parts were dusted over with iodoform, and a dry dressing applied. The acute symptoms disappeared within a few hours of the operation, and at the end of five weeks the patient expressed a strong desire to leave the hospital, as she felt in excellent health, and her bowels were moving naturally.

A firm, resistant mass could now be felt on the right side in line of ascending colon, close to the liver, and which was diagnosed to be a malignant tumour. The patient was advised to keep the colotomy wound open and to return for further treatment.

She was readmitted on 10th October, being now quite prepared to undergo another operation, partly in consequence of a return of her previous symptoms while at home, and also owing to the inconvenience attendant on the discharge from the colotomy wound.

The tumour was reached through a median incision above the umbilicus, and after adherent omentum had been separated, and the vessels ligatured, about 10 inches of the colon was excised. An attempt was made to bring the divided ends of the gut together by a continuous Lembert suture, but it had to be abandoned owing to the difficulty of bringing the ascending colon to the wound. A Murphy's button was therefore used, and the operation completed without trouble or delay. For the next few days there was considerable collapse, which was treated by the free administration of stimulants, and injections of liq. strychnia every four hours. After this, however, the patient improved steadily, and, towards the end of the second week, her condition was entirely satisfactory. The button was passed on the third week. The bowels acting naturally, the colotomy wound contracted to a narrow sinus, which finally closed after the mucous membrane was snipped off with scissors at its attachment to the skin.

[When seen in May, 1900, she was in the enjoyment of excellent health.]

*CASE II.—Fibrous stricture of sigmoid flexure removed from a patient, æt. 25, after a preliminary right inguinal colotomy had been performed for relief of symptoms of acute obstruction.*

J. M., housemaid, was sent to the Victoria Infirmary on 13th May, 1899, by Dr. Russell, Langside, as a case of intestinal obstruction. Until four days before admission the patient was in enjoyment of excellent health, and the bowels moved daily or every second day. Constipation, followed by sickness and transient abdominal pain, were the first symptoms of her illness. On the evening of the 12th she was seized with severe abdominal pain, and, on the following morning, rectal injections were tried; but no relief being obtained, and the vomiting becoming stercoraceous, she was at once sent to the infirmary.

Through a median incision the abdomen was explored, and a large, firm mass, measuring about 3 inches in length, was felt in the sigmoid flexure, with the bowel below it empty, while that above was greatly distended. The wound was then closed, and right inguinal colotomy performed. Immediate relief followed. On 1st June the sigmoid flexure was removed, and the ends of divided gut brought together by a Murphy's button. The subsequent course of the case was in every respect satisfactory, and the colotomy wound closed after the mucous membrane from the sinus was removed.

[The patient was seen in May, 1900, and was very well.]

#### IV.—CARD SPECIMENS.

By DR. RUTHERFURD.

Three specimens of goitre successfully removed under local anæsthesia, the specimens weighing 10 oz., 13 oz., and 19 oz. respectively.

### GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1899-1900.

MEETING VIII.—14TH MAY, 1900.

*The President, DR. THOMAS BARR, in the Chair.*

#### I.—TWO CASES OF HEMIPLEGIA DUE TO SOFTENING IN THE PONS.

By SIR WILLIAM T. GAIRDNER; WITH NOTES OF THE PATHOLOGICAL CONDITION BY PROFESSOR ROBERT MUIR.

CASE I.—George M'G., æt. 34, shipwright. The principal facts in this case, as admitted for treatment on 19th January, 1900, were cardiac; and as his death took place, after five weeks' residence, from the constantly increasing severity of these symptoms, which were stated to have been of two months' duration on admission, the facts connected with the nervous system were only incidentally noted, with a view to completeness of the record. It was ascertained, however, that the patient had had a rheumatic attack of some kind in 1890, and that his father was a rheumatic subject, probably



with cardiac complication. It was also ascertained that he had malarial fever in 1894-95, and something designated as "sunstroke" in 1897, characterised by severe headache, and, later in the same year, paralysis of right side, with at least some considerable, though temporary, disorder of speech. It was admitted that he had had a "mild attack" of specific disease, without any obvious secondary or other sequelæ. His recovery from the hemiplegic attack took place long before the cardiac symptoms became at all troublesome—so much so that he was able to ride on a bicycle, and did not appear to be greatly embarrassed in walking, notwithstanding an old fracture of the right femur, which had shortened the limb. Exaggerated knee-jerk, however, was present, on admission, on the right side, with a slight amount of relative loss of power. Otherwise there was no kind of disturbance of the innervation (Journal of Ward I, D, p. 125).

*Post-mortem examination.*—The following were the chief facts ascertained at the *post-mortem* examination:—The arteries at the base of the brain, with the exception of slight sclerotic thickening at places, appeared quite healthy, and no thrombosis could be found. In the right hemisphere, above the posterior horn of the lateral ventricle, there was a small patch of softening about half an inch in diameter. This contained turbid fluid, and had a well-marked wall; it was apparently of considerable standing. There was no softening or lesion of any kind in the basal ganglia or in the crura. On examining the pons, however, a well-marked softening was found on the left side. It was in the anterior half of the lower part below the emergent root of the fifth cranial nerve. It thus involved the descending pyramidal fibres. The left half of the pons at this level was distinctly smaller than the right, and the difference between the two sides was more marked in the medulla, where the left pyramid was much shrunken. Microscopic examination of sections of the medulla, stained by the Weigert-Pal method, showed a well-marked degeneration affecting almost the whole of the left pyramid; the right pyramid, on the other hand, showed no degeneration. In the cord the descending degeneration was well marked: in the cervical and dorsal regions the degeneration on the left side appeared to involve almost the whole of the crossed pyramidal tract, but in the lumbar region it was of slighter extent than usual. There was no discoverable degeneration in the direct pyramidal tract. The heart was considerably enlarged, both sides being affected. The aortic valve was incompetent, its

segments being thickened and shortened as the result of chronic endocarditis. It showed, however, no distinct vegetations. The mitral valve was free from endocarditis. The left ventricle was considerably dilated, and also hypertrophied, the thickness of its wall varying from three-quarters of an inch to a quarter of an inch. The inner half of its muscle was distinctly fatty, and the endocardial surface showed well-marked, yellowish mottling. The right ventricle was slightly hypertrophied and dilated. Here, also, there was some fatty change, but it was less marked than on the left side. The valves on the right side were healthy. The aorta showed only a slight degree of atheromatous change. The left lung showed pneumonic consolidation almost throughout. The whole lung was very cedematous. The right lung showed some cedema. The other organs showed the result of passive congestion.

In this case, accordingly, there was well-marked descending degeneration in the motor fibres similarly due to a one-sided lesions in the pons. It is more likely that the vascular lesion was thrombosis rather than embolism, but, in either case, the fact that the lesion should be so distinctly confined to the one side is striking. Unlike the condition in the next case, the basilar artery was free from thrombosis, and hence probably only a small branch was involved. The presence of another small softening in the right hemisphere, which apparently produced no distinct symptoms, is also to be noted.

**CASE II.**—James F., æt. 54, labourer, admitted 31st January, 1900. This patient was, on admission, evidently labouring under a cerebral attack, which was somewhat vaguely, but still with some probability, attributed to "influenza" ten weeks before admission. There was incomplete right hemiplegia, and certainly some difficulty in speaking, but probably not complete aphasia. Improvement took place in this respect, but at a later date (some weeks before admission) he began to suffer from "fits," and these recurred as many as six or seven in the day, lasting about ten minutes, during which he had to be "held down," as his landlady said. There were premonitions of these fits, but it was not possible to get at any exact localising circumstances. He complained, however, of pain in his left temple, worse at night. Ocular symptoms were difficult to elicit, as one eye had been destroyed by injury, and both eyes were kept firmly closed against all attempts to open them while in the ward. The only pupil available for observation, however, tended to myosis. The

reflexes were slightly exaggerated on the right side, and there was slight ankle-clonus. There was no well-defined aphasia after admission. There was no obvious lesion of any organ outside the nervous system. The patient usually lay in a somewhat torpid, lethargic condition, not amounting at first to positive coma, but deepening gradually during residence, so that catheterism was required, and ultimately all the discharges were voided in bed, and he ceased to indicate any of his physical wants. The temperatures were fairly normal till near the close; on the 19th of February they rose a little, but never so far as to reach 101° F., till a few hours before death on the 24th February, when a quite sudden rise took place to over 105°, and from this till death on the same date, when 106° F. was reached, and even exceeded.

*Post-mortem examination.*—The arteries at the base of the brain showed a moderate degree of general sclerosis, but the only vessel which showed degenerated patches of atheroma was the right internal carotid, which was markedly affected in its whole course within the cranial cavity. It was also thrombosed, the thrombus (which was comparatively recent) extending up to, but not into, the middle cerebral artery. On the right side there was, however, no distinct evidence of softening in the area of distribution of the middle cerebral artery. The thrombosis of the carotid had probably occurred a short time before death, and may have contributed to the production of the comatose condition. The basilar artery was thrombosed throughout its full extent, but the thrombus did not extend beyond its extremities. The thrombus was of firm consistence, and, evidently, of some standing. On the left side of the pons in the upper part there was a softening of irregular rounded shape, fully half an inch in diameter, and involving the pyramidal fibres. There were also numerous small foci round the main softening. In the right crus there was a patch of softening involving the inner part of the locus niger and the red nucleus. Lower down, this softening appeared to extend outwards, and almost reached the surface midway between the anterior and posterior aspects of the pons. On this side the main mass of the pyramidal fibres seemed to have escaped. There were no softenings visible on naked-eye examination. No noticeable change in the motor tracts below the lesion could be detected on naked-eye examination, but in sections stained by Marchi's method there was found an extensive degeneration of the pyramidal fibres on the left side, this degeneration passing downwards and

crossing to the other side at the decussation. (The spinal cord was not examined in this case.) On the right side a small proportion of the fibres throughout the pyramidal tract were degenerated, but the degeneration is relatively slight. In sections stained by Weigert-Pal method, the pyramidal tracts on both sides stained well, that on the left side rather less deeply than the right.

These facts demonstrate that the thrombosis had not lasted sufficient time to allow absorption of the broken-down myelin; in all probability its duration was about three or four weeks.

The condition of the parts at the level of the softening was not examined microscopically, as the specimen was preserved as a museum preparation. The other organs showed nothing worthy of special mention. The aorta showed atheroma, but not in a marked degree. The condition of the heart was practically normal.

This case agrees with the previous in the fact that the lesion of the pons was practically confined to one side, producing degeneration of the motor fibres. It is to be noted that here also the main lesion in the pons was on the left side, although the basilar artery was thrombosed in its full extent. The condition of the motor fibres in the medulla, as seen by Marchi's method, showed clearly that on the right side they had almost entirely escaped, whereas on the left side they were very extensively involved.

*Dr. Alex. Robertson* remarked on the absence of the distinctive symptoms of lesion of the pons. One expects marked myosis, although in an acute case the pupils may be dilated, or even irregular—this on account of destruction of the third nerve by the lesion. There was also no account of anæsthesia, which looked as if the fifth nerve—so intimately connected with the pons—had escaped. In a case of unconsciousness, due to apoplexy, which he had observed, there was right-sided hemiplegia, with inequality of pupils. On pinching either cheek there was no movement of the face, but active movement of the right arm and of the toes of both feet was observed when one pinched the left side of the face. These phenomena resulted from the complex arrangement of parts in the pons. Sometimes there were convulsive movements, as in Sir William Gairdner's second case, and temporary aphasia such as had been noted in the first case. It was very curious that one should have aphasia in a pontine lesion. He had been struck also with the fact that there was no indication of softening, even with the carotid plugged, but he agreed with

Professor Muir that perhaps the occurrence of the lesion in the carotid had been too recent to give time for softening to occur.

*Sir William Gairdner*, in reply, considered Dr. Robertson right as regards the absence of signs in the first case. In the second case the symptoms were so complex that no importance was attached to the absence of any. Still, it had been noted that one pupil was myotic. In the first case the lesion in the pons, three years before death, had been recovered from, and there were no distinctive symptoms on admission.

When Sir William had concluded, the *President* made the following remarks:—

Gentlemen, Our feelings to-night must be those of sadness and regret when we consider that the active membership of Sir William Gairdner probably comes to an end with this meeting. Since the origin of the Glasgow Pathological and Clinical Society in 1873 Sir William has never failed to take a keen interest in its work, being rarely absent from the meetings, and ever—he was ever—willing to put forth a helping hand. Even during the session now closing Sir William has on several occasions cheered us by his presence, and, as we have seen to-night, he has not lost the power of endowing every subject he touches with fresh and unique interest, nor has his literary charm yet failed to captivate. He will be sadly missed by the members of this Society, many of whom have been his students. To myself he has never ceased to be an inspiration since I had the privilege of entering as one of his students, now thirty-four years ago. Shall we ever look upon his like again? It is, I am sure, the earnest wish of every member of this Society that our revered teacher and friend may have still many years before him to enjoy his well-earned rest, although we may be assured that in his retirement he will never cease to be interested in the problems and the progress of our profession.

## II.—SARCOMA OF THE FEMUR, IN WHICH FRACTURE HAD OCCURRED AT THE SEAT OF THE TUMOUR.

By PROFESSOR HECTOR C. CAMERON.

In Professor Cameron's absence, Mr. G. H. Edington showed the specimen. The following is a summary of the case:—

Joseph B., aged 22, sawyer, was admitted on 25th January, 1900, to Ward XX of the Western Infirmary, with the history that while engaged "capering" with a mate he suddenly felt

something snap above the left knee, and immediately thereafter fell to the ground. He had previously enjoyed good health, with the exception of a "rheumatic" condition above the left knee. This, which was characterised by pain in the bone, had been present off and on for the best part of a year, and had been treated by the application of liniments. During the day previous to the accident he had had remission from the pain.

On examining the limb, fracture of the shaft of the femur above the condyles, and without displacement, was found. The limb was put up in the usual manner with a long splint.

On 9th March no union had taken place, and the splints were continued, but the condition was no better on 25th of that month. On 18th April, on removing splint, in addition to free mobility, a soft swelling was felt at the seat of fracture, and especially on inner aspect. Crepitus was felt on palpating this swelling. Dr. Cameron suspected that the case was one of sarcoma, and on having a skiagram made, a large gap was found between the upper and lower fragments; in the gap were traces of rarefied bone, and the ends of the fragments also showed rarefaction.

There was no evidence of any implication of the lungs, and the heart was normal on examination.

On the 27th April Dr. Cameron disarticulated at the hip-joint. A preliminary incision at the seat of fracture was followed by the escape of some blood and slimy material. The tissues here were moderately brittle to the touch. Anterior and posterior flaps were made, the external junction of which extended well up above the trochanter. Skin and subcutaneous tissue only were raised in the flaps up to the level of the trochanters, where the muscles were divided by a circular incision to the bone. The bone was sawn through just below the trochanters, and the main vessels were tied. The soft parts were then dissected up by means of a scalpel, and the head of the bone cleared. The capsule having been divided, the bone was turned out of the acetabulum and removed.

During the operation the circulation was controlled by pressure exerted on the abdominal aorta by the fist of an assistant.

At the beginning of the operation the patient stopped breathing, but recovered after prolonged artificial respiration, and gave no further trouble. The operation was followed by some slight shock, from which, however, the patient rallied in the course of the afternoon. The case made an uneventful recovery.

*Pathological examination* of the parts was made by Dr. A. R. Ferguson, and may be summarised as follows:—

A bulky, lobulated tumour, of soft consistence and of pinkish-grey colour, envelopes lower part of shaft of femur, but leaves the articular surfaces free. Areas of hæmorrhages are frequently present. Posteriorly there exists a ragged opening, in the interior of which the ends of the bone, which has suffered spontaneous fracture, can be felt. A number of small particles of bone are felt throughout the tumour in this situation. Anteriorly, an irregularly excavated passage in the tumour opens into the knee-joint behind the condyles, and there is slight hæmorrhage in the neighbourhood of the crucial ligaments. The medullary canal of the bone, as far as the head, is free of tumour-tissue.

*Microscopic examination.*—Very well-marked, spindle-celled sarcoma; cells, on the whole, are of the large variety, but small spindles are also present. Blood-vessels are not at all numerous, but appear to be rather few in number. A good many leucocytes are present in the growth, chiefly lymphocytes.

(The report of this Meeting will be continued in our next issue.)

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## REVIEWS.

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*The Student's Handbook of the Surgery of the Alimentary Canal.* By A. ERNEST MAYLARD. London: J. & A. Churchill. 1900.

THIS work, we are told in the preface, is “an abridged and amended edition” of the author’s *Treatise* on the subject, published in 1896.

The actual region of the alimentary canal treated extends from the upper end of the œsophagus to the lower end of the rectum proper, and the diseases of the mouth, fauces and pharynx, and of the anus are excluded.

In pursuance of the above plan, we have the subject-matter arranged in four parts, viz.:—*Œsophagus, Stomach, Intestines, and Rectum.* To each part is prefixed a short account of the surgical anatomy and physiology. Then comes a consideration of injuries, foreign bodies, inflammatory affections, ulcers, tumours (innocent and malignant), and

abnormalities, while each section concludes with a description of the various operative measures applicable to the region treated of.

The volume represents a vast amount of work, and contains much valuable information. A feature which strikes the reader is the oft-repeated recommendation to operative procedure, but the masterly handling of the subject of the treatment of appendicitis removes from one's mind any impression of the author being inclined to excessive operation. This we consider one of the best written parts in the book.

We are surprised that no comment is passed on the term "subphrenic pyopneumothorax," mentioned on p. 142 as used by Dickinson and Leyden, and which is very suggestive of the "Green Isle."

In connection with gastro-jejunostomy, no description is given of short-circuiting the intestine, except on p. 183, where a brief mention is made of a method adopted by Rutherford Morrison. There would reasonably, we think, be more cicatricial contraction following the removal of tissue by Murphy's button (p. 185) than after an operation without such mechanical aid.

Perhaps in a future edition the author may include an account of the gunshot wounds met with in military practice, in which the different characters of the projectiles may have some influence on prognosis and treatment. On p. 301 the mention of the fixity of the muscles of the abdomen in peritonitis, coming immediately after the statement regarding the relaxation of the abdominal parietes, is a little incongruous.

The pathological classification of carcinomas of the large intestine is very good, and if adopted by others would tend to clear up any misconception as to the microscopic nature of the tumour.

The nomenclature of operations is also well worked out.

In considering the presence of tumour in appendicitis (p. 364), the question of the palpability of an enlarged appendix is not mentioned, while later on (p. 406) the author leads us to believe, and rightly too, that an enlarged appendix may sometimes be evident to the finger before operating.

We are glad to hear the note of warning sounded against the wholesale attribution of ulceration of the rectum to syphilis.

There are a few printer's errors in the text, the most notable being that on p. 148, where for "cutaneous" one reads "calcareous."

The illustrations, many of which are from photographs of



specimens, are well executed, and add to the value of a book which we can strongly recommend to all interested in the subject of the alimentary canal, and on the production of which we can heartily congratulate Mr. Maylard.

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*Practical Text-Book of Midwifery for Nurses and Students.*  
By ROBERT JARDINE, M.D. Edinburgh: W. F. Clay. 1899.

*The Hæmorrhages of Pregnancy, Parturition, and the Puerperium: The Treatment of Puerperal Eclampsia by Saline Injections.* By ROBERT JARDINE, M.D. Edinburgh: W. F. Clay. 1899.

BOTH these works by Dr. Jardine may be confidently recommended to a wider circle than that for which they were originally prepared. The practitioner as well as the student will find them full of practical teaching of the highest value. Detailed criticism is unnecessary, as Dr. Jardine wisely leaves alone the purely theoretic aspect of the subject with which he deals. It is interesting, however, to note that the treatment of eclampsia by saline injections, which he was the first to advocate, has received considerable attention from Continental writers.

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*Practical Gynæcology: A Handbook of the Diseases of Women.* By HEYWOOD SMITH, M.A., M.D. Second Edition. London: H. J. Glaisher. 1900.

LITTLE can be said in favour of this book. The arrangement is bad, the pseudo-philosophical introduction is worse. The surgical measures advocated are often puzzling by reason of their antiquity. We fail to see how this book can serve any useful end.

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*Outlines of Bacteriology.* By WM. ST. CLAIR SYMMERS, M.B. Aberd. London: Charles Griffin & Co., Limited. 1899.

THIS text-book is a translation from the French of Thoinot and Masselin's *Precis de Microbie*, "with such alterations and additions as were deemed advisable in the interests of English-speaking students and practitioners." The original work in

French is recognised by bacteriologists as one of the best text-books we have, and we cannot praise too highly the way in which the translator has done his work. The numerous alterations and additions bring the work up to date, and the arrangement of the work, with its divisions and numerous subdivisions, is such as to be eminently adapted for the overworked advanced medical student. There are ninety-eight illustrations, many of them coloured, and all of them excellent. The book is elegantly bound in leather, and is uniform in size with the other books of the series of "Griffin's Medical Pocket-Books."

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*Bacteriology in Medicine and Surgery.* By WM. HALLOCK PARK, M.D., and A. R. GUERARD, M.D. London: Henry Kimpton. 1900.

THIS book is, we think, more suited for medical practitioners and health officers than for medical students. The advanced student, overburdened as he already is with work, requires a text-book giving the up-to-date essentials of bacteriology; but this work, as its title almost implies, goes somewhat beyond the student's requirements. To medical practitioners, however, who have already acquired some knowledge of bacteriology, the work can be recommended. To many, such chapters as that on practical disinfection and sterilisation (house, person, instruments, and food), and that on the procuring of material for bacteriological examination from those suffering from disease, will be found to be of great practical value. The book is well printed, and contains numerous illustrations, the majority from photographs taken from cover-glass preparations and cultures.

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*Occasional Lectures on the Practice of Medicine, addressed chiefly to the Students of St. Mary's Medical School, to which are appended the Harveian Lectures on the Rheumatism of Childhood.* Revised and corrected up to date. By W. B. CHEADLE, M.D., F.R.C.P. With Illustrations. London: Smith, Elder & Co. 1900.

THE variety in the nature of the different elements which go to make up this work is associated with an almost equally striking variety in merit, and we are disposed to question

the wisdom of the author's judgment in publishing in the same volume lectures which are mainly adapted to the needs of students, and the Harveian lectures, which can only be properly appreciated by physicians of some experience. The experienced man will be disposed to pass quickly over the earlier lectures, but will find the later ones worthy of more than one careful perusal. It is to the author's credit that he has kept the best to the last.

The first lecture is on the use and abuse of tonics, and as Dr. Cheadle fears that the harm done by the mistaken use of tonics is, perhaps, greater than the good done by their proper employment, the question arises whether it might not have been more judicious on his part to dissuade his students from using tonics at all. The next lecture is on the uses of opium; the next on some minor diseases of childhood; the fourth on chronic constipation and dilatation of the colon. Lecture V is a useful one on rickets in its medical aspects, and calls attention to the fact that this disease is not simply an affection of the bones, but one in which various important tissues are liable to suffer. The author seems to believe in that questionable operation, scarification of the gums in teething. The sixth and seventh lectures are on the treatment of diseases of the respiratory system, and do not call for special remark here. Lecture VIII is on the forms of chorea and their treatment. Dr. Cheadle thinks that grimacing chorea and the second dentition stand in the relation of effect and cause. Some sensible remarks are made on the treatment of genuine chorea, and we note the author's experience that the average hospital residence of cases treated by arsenic was twenty-four days, as compared with forty days in the case of those not so treated. Lecture IX, on infantile scurvy, is a very important one, and deserves careful study. The author remarks that it is now twenty years since he first drew attention in this country to the occurrence of sporadic scurvy in infants. Before the nature of the disease was recognised, the mortality, now greatly reduced, was over 20 per cent. The affection is quite distinct from rickets. An appendix follows this lecture, showing in tabular form the age, faulty diet, and result of anti-scorbutic diet in sixty-one cases of infantile scurvy.

The latter portion of the present work consists of three lectures on "the rheumatism of childhood," originally delivered before the Harveian Society in 1888, thereafter published in the *Lancet*, and now thoroughly revised so as to bring them up to date. They constitute a very important contribution to

medical literature, and every physician should make himself familiar with their teaching, though we cannot ask him to accept it all as sound.

To give even a brief digest of these lectures would occupy a good deal of space, but it may be said that Dr. Cheadle selects seven "phases," which, in addition to arthritis, constitute the "rheumatic series." These phases are: endocarditis, pericarditis, pleurisy, tonsillitis, subcutaneous nodules, chorea, and exudative erythema. The ordinary conception of rheumatism is based on the arthritis, which is the phase commonly met with in the adult, while insufficient attention is apt to be paid to the significance of some of its manifestations in the child. Dr. Cheadle seems to think that in chorea the predisposing cause is nervous excitability plus the rheumatic diathesis, while the exciting cause may be fright, acute rheumatism, or pregnancy. Some of his data on the age incidence of rheumatism, chorea, and heart disease are of great interest and significance, and altogether, were it only for those three lectures, this volume deserves our most hearty welcome.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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### SURGERY.

By G. H. EDINGTON, M.D.

**The Closure of Abdominal Wounds and Hernial Apertures by Means of Buried Silver Wire Nets (Healing-in of Filigree Knots).** Witzel, of Bonn (*Centralbl. für Chir.*, No. 10, 1900, p. 257).—In suturing a previously normal abdominal wall, the coaptation of the elastic fascial sheaths is of importance. The sutures are inserted in layers, of which the deepest includes peritoneum, fascia transversalis, and mesial margins of recti muscles. For this purpose cross loops are passed from behind forwards at distances from one-half to three-quarters cm. These loops are twisted with the fingers into narrow spirals, which are cut off about 1 cm. long. This length allows of their lying flat in the plane of the abdominal parietes. For the anterior layers of fasciæ a continuous suture of fine silver wire is used. The network so formed is buried by fine silver sutures, which unite the already closely approximated margin of the skin wound.

In cases where there is a considerable gap between the recti, or where incision has been made to one side of middle line, the *deep* sutures are not only passed more widely through the muscles, but are made to cross each other obliquely.

In the closure of hernial apertures, close-meshed wire nets of suitable shape were laid in ever greater extent, and used as filigree knots for healing-in.

The buried net should generally have a diameter at least three times the size of the actual aperture. The more widely the threads are passed the less do they influence by pressure the character of the sutured tissue, while they heal-in more securely. The margins of the aperture are closed as well as possible without undue tension. The rest of the gap is closed by the thick meshwork.

In *inguinal hernia* the network includes the whole thickness of the inguinal ligament down to the epigastric artery, and extends from the middle line outwards over the inguinal canal. A larger mesh allows of the free passage of the spermatic cord.

In *femoral hernia* the presence of the vein makes the procedure somewhat more difficult. It is held outwards during the placing of the deep net, which forms an extension of the external concave margin of Gimbernat's ligament. A more widely grasping and somewhat more superficial filigree net forms the plug (pelotte) proper. As in other difficult situations one stretches the suture flat over the margins of the aperture in a suitable way, and fixes it round about with a series of claw-loops.

On account of the good results from the use of this network, even when suppuration is present, it may replace celluloid plates in heteroplastic closure of skull defects, &c., and filigree tubes may be used in the repair of bone.

**The Healing-in of Wire Sutures in Skull Defects.** Alfred Gleich, of Vienna (*Centralbl. für Chir.*, No. 15, 1900, p. 412).—Two cases of loss of bone following injury in frontal region are reported by Gleich, in which the defect was made good by bridging composed of aluminium bronze wires. In one case suppuration occurred, but the wire remained firm, and the case ultimately did well. The second case healed without suppuration, but an ulcer subsequently formed, requiring extraction of wire for its closure. The ultimate result was good. Wire of fine gauge is recommended.

**Traumatic Hernia.** F. de Quervain (*Sémaine Médicale*, 14th March, abstracted from *Journ. of Amer. Med. Assoc.*, 14th April, 1900).—More or less considerable effort or traumatism necessary. True traumatic hernia is almost invariably accompanied by sudden severe pain, and frequently by strangulation. If inguinal canal large and not oblique, traumatic origin of the hernia is less probable. The swelling is never larger than a lemon, except in the rarest cases. Irreducibility indicates old adhesions, and is therefore against trauma, while double hernia is almost unknown. Ectopia testis also points against trauma. Thin sac, without adhesions to cord or thickening of latter, is in favour of fresh traumatic hernia.

**Rhizomelic Spondylosis.** Eshner (*Journ. of Amer. Med. Assoc.*, 7th April, 1900).—Essentially, the disorder is characterised by increased posterior curvature, with lessened mobility, of spinal column, often without but sometimes with nerve-root symptoms and involvement of other joints, particularly the large ones of the trunk. There is a proliferative and rarefying inflammatory process in the vertebræ, discs, and ligaments. In some cases there is meningitis, sometimes primary, sometimes secondary or associated. The author gives a description of the case of a man, aged 24, with a rheumatic history. There was a marked convexity of dorsal spine, and some loss of power in the extremities, especially in the left arm. Limitation of movement at shoulder and hip-joints was noted, also exaggeration of superficial reflexes and complaint of generalised pain.

**Resection of Stomach, First Part of the Duodenum and Great Part of the Pancreas.** Ricard (*Gaz. des Hôpitaux*, 22nd March, 1900).—The patient, aged 52, was supposed to have carcinoma of the greater curvature. There was vomiting, loss of appetite, emaciation, and pallor. An irregular hard tumour could be felt in the epigastrium. On 26th April, 1899, the abdomen was opened, and the tumour was found on the curvature, and

involving both surfaces of the stomach, but principally the posterior. The omenta were clamped, and the duodenum divided at the upper end of the vertical portion. The œsophagus was then divided, clamps having been previously applied. The stomach was still fixed, on account of its being fused to the pancreas. This necessitated removal of considerable portion of latter viscus, which was cut at the vena cava. Infected glands were removed from the aorta. The duodenum was then closed, the cardiac end of the stomach being also stitched up, and a loop of jejunum attached to the ampulla, so-formed, by lateral gastro-enterostomy. The operation lasted one hour and a quarter. In the evening and during the next day there was sanguinolent regurgitation. Peptonised enemata were given. On the third day tampon removed from pancreatic stump. On the twenty-fifth day the pancreatic fistula was closed. Some milk and grog were given by mouth on the fourth day, and on the fifth some soup. The growth was a cylinder-celled epithelioma. The patient was shown eleven months after the operation.

**The Practical Value of the White Blood-Count in Surgical Cases.** J. C. Hubbard (*Boston Medical and Surgical Journal*, 19th April, 1900).—189 non-inflammatory cases—cysts, fibroids, chronic appendicitis, gall-stones, &c.—gave an average of 8,811; 71 cases of inflammation not so great as to form pus—12,645; 299 cases of pus-formation—17,696.

On the average, blood-counts may be of value, but we cannot form a definite conclusion in an individual case, and the blood-count should have very little weight, as compared with the physical signs, in helping to a diagnosis.

**Contused Wound of the Liver (and of Right Lung); Circumscribed Purulent Peritonitis; Secondary Serous Pleurisy and Pneumonia.** K. G. Lennander (*Nord. Med. Arkiv.*, 1899, No. 35, II, abstracted from *Gaz. des Hôpitaux*, 5th April, 1900).—A man, aged 32, was struck by the pole of a coach at the level of the right costal margin. Pain followed quickly, with fever, swelling, some vomiting, and slight hæmatemesis. Fifteen days later, on his entering hospital, there was tumefaction of the whole epigastrium and right hypochondrium. Behind, there was dulness to level of angle of scapula. Exploratory puncture, followed soon by incision, evacuated an enormous quantity of chocolate-coloured, slightly reddish fluid. The liver was displaced downwards and inwards, and slightly rotated around its antero-posterior axis; and between it and the diaphragm was an immense cavity limited by peritoneal adhesions, and extending down to the anterior superior spine of the ileum. On the surface of the liver was a hole the size of a hen's egg, and with contused surface. The cavity was tamponned with gauze.

The operation was followed by grave pulmonary complications—right pleurisy and pneumonia, with tendency to invasion of left lung. Puncture of the right pleura was found necessary on several occasions. Two months later the patient was well.

The case is interesting in the following points:—The spontaneous infection of the sub-diaphragmatic biliary effusion; the encysting of this enormous effusion; the sterility of the pleurisy; the probable torsion of the vena cava by the rotation of the liver.

**Traumatic Pseudo-Hydronephrosis.** Jossierand (*Lyon Médical*, 13th May, 1900).—A girl, aged 8½ years, fell from a cab six weeks previously. Two hours after the accident there was a trace of blood in the urine. When admitted to hospital there was slight dysuria, an occasional trace of blood in the urine, and a tumour in the left flank. This tumour was fixed, of large size, smooth outline, and was fluctuant on palpation. The condition was thought to be a localised tuberculous peritonitis with effusion. Laparotomy showed a cavity in the perirenal region, with smooth lining, and containing about 3 litres of clear fluid. The chief complaint was of digestive troubles from

pressure on the colon. The smooth lining of the sac was simply connective tissue. The fluid contained urea, 1·60 grm. to the litre.

**Septic Thrombosis of Cavernous Sinus.** Jamieson (*Intercolonial Medical Journal of Australasia*, February, 1900).—A woman, aged 22, had two carious teeth extracted, one of them with an abscess at the root. Symptoms of constitutional affection developed the same day. Ten days later there was severe pain in right temple and eye, with swelling of same side of face and neck. Double exophthalmos developed, and she died nine days later. Thrombosis was found to have occurred in cavernous sinuses and in the veins connecting cavernous sinus with pterygoid plexus through foramen ovale and foramen Vesalii. The author looks on the alveolar abscess as the primary source of infection.

**A New Method of Performing Uranostaphylorrhaphy.** Ferguson (*Journal Amer. Med. Assoc.*, 19th May, 1900).—1. Cut through the mucous membrane of the mouth about  $\frac{1}{4}$ -inch from margin of cleft, and divide all the soft structures up to, but not through; the mucous membrane on the nasal aspect of palate. These flaps are turned towards middle line, and united by fine interrupted silk sutures, knotted on the nasal side.

2. Insert interrupted horsehair sutures on the buccal surface of the palate from the tip of the uvula forward, tying them where apposition is possible without tension. The soft structures of the hard palate cannot usually be brought together until the next step of the operation is taken.

3. This consists in forming muco-periosteal flaps, which are raised from bone by the elevator introduced through usual incision in the alveolar border. The wound between flap and alveolar ridge is packed with iodoform gauze. This "crowds" the parts together, and allows of sutures being tied without tension. Stitches should be removed not earlier than twelfth day. In cases where cleft is wide, and soft parts at edges of gap are thin, employ the "crowding" operation primarily.

### *Books, Pamphlets, &c., Received.*

**Diseases of the Genito-Urinary System: A thorough Treatise on Urinary and Sexual Surgery**, by Eugene Fuller, M.D. London: Macmillan & Co., Limited. 1900. (21s. net.)

**Edinburgh Hospital Reports**, edited by G. Lovell Gulland, M.D., F.R.C.P. Ed., and James Hodsdon, M.D., F.R.C.S. Ed. Illustrated with Numerous Full-page Plates. Vol. VI. Edinburgh: Oliver & Boyd. 1900.

**Archives of Neurology and Psycho-Pathology.** Vol. II, Nos. 3, 4. Utica: The State Hospitals Press. 1899. (3 dols. per vol.)

**Manual of Midwifery**, for the use of Students and Practitioners, by W. E. Fothergill, M.A., B.Sc., M.D. With Double-Coloured Plate, and 76 Illustrations in the Text. Second Edition. Edinburgh: William F. Clay. 1900. (9s. net.)

**The Bacteriology of Every-day Practice (Medical Monograph Series, No. 2)**, by J. O. Symes, M.D. Lond. London: Baillière, Tindall & Cox. 1900. (2s. 6d. net.)

- Reports from the Laboratory of the Royal College of Physicians, Edinburgh.** Edited by Sir John Batty Tuke, M.D., and D. Noël Paton, M.D. Vol. VII. Edinburgh: Oliver & Boyd. 1900.
- Progressive Medicine: A Quarterly Digest of Advances, Discoveries, and Improvements in the Medical and Surgical Sciences.** Edited by Hobart Amory Hare. Vol. I (March, 1900). London: Henry Kimpton. 1900.
- Weekly Day and Night Sick Room Chart.** London: Jarrold & Sons. (1s.)
- Eleventh Annual Report of the Derby Borough Asylum for the Year ending 31st December, 1899.**
- Records from General Practice, by J. Kingston Barton, M.R.C.P.** Lond. Part I. London: John Bale, Sons & Danielsson, Ltd. 1900. (2s. 6d. net.)
- Appendicitis (Medical Monograph Series, No. 3), by A. H. Tubby, M.S. Lond.** London: Baillière, Tindall & Cox. 1900. (2s. 6d. net.)
- The Diseases of Exposure, their Frequency and Distribution in relation to the Seasons, by William Lawson, M.D., Glasgow.**
- A Tract for Chest Cases.** Guernsey: Fred. Clarke.
- County of Lanark: Ninth Annual Report upon the Health and Sanitary Condition of the County (1899), by John T. Wilson, M.D., D.P.H.** Glasgow: Robert Anderson. 1900.
- The Pocket Formulary for the Treatment of Disease in Children, by Ludwig Freyberger, M.D.** Second, revised, and enlarged Edition. London: Rebman, Limited. 1900. (7s. 6d. net.)
- Refraction, and How to Refract, by James Thorington, A.M., M.D.** 200 Illustrations, 13 of which are Coloured. London: Rebman, Limited. 1900. (7s. 6d. net.)
- A Contribution to the Study of Epidemic Diarrhoea, by Arthur Newsholme, M.D.** London: Rebman, Limited. 1900. (2s. 6d. net.)
- The International Text-book of Surgery.** Edited by A. Pearce Gould, M.S., F.R.C.S., and J. Collins Warren, M.D., LL.D. Vol. I: General and Operative Surgery (with 458 Illustrations in the Text, and 9 Full-page Plates in Colours). Vol. II: Regional Surgery (with 471 Illustrations in the Text, and 8 Full-page Plates in Colours). London: Rebman, Limited. 1900. (54s. net. Two Vols.)
- The American Year-Book of Medicine and Surgery, being a Yearly Digest of Scientific Progress.** Edited by George M. Gould, M.D. Vol. I: Medicine. Vol. II: Surgery. London: Rebman, Limited. 1900. (30s. net complete; or 17s. net each vol.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDING 23RD JUNE, 1900.**

	WEEK ENDING			
	June 2.	June 9.	June 16.	June 23.
Mean temperature, . . .	54·3°	56·3°	63·3°	58·6°
Mean range of temperature between day and night, . .	16·4°	21·5°	19·3°	26·6°
Number of days on which rain fell, . . . . .	1	4	4	6
Amount of rainfall, . . ins.	0·14	0·30	1·52	1·02
Deaths registered, . . .	296	285	286	269
Death-rates, . . . . .	20·7	19·9	20·3	18·8
Zymotic death-rates, . . .	3·7	3·0	3·3	2·7
Pulmonary death-rates, . .	5·5	5·7	5·7	5·0
DEATHS—				
Under 1 year, . . . . .	56	51	61	66
60 years and upwards, . .	54	57	43	47
DEATHS FROM—				
Small-pox, . . . . .	1	...	...	1
Measles, . . . . .	14	14	14	11
Scarlet fever, . . . . .	0	4	1	2
Diphtheria, . . . . .	3	2	1	3
Whooping-cough, . . . .	21	14	17	16
Fever, . . . . .	1	4	2	1
Diarrhoea, . . . . .	13	4	12	5
Croup and laryngitis, . .	2	2	0	0
Bronchitis, pneumonia, and pleurisy, . . . . .	57	58	43	49
CASES REPORTED—				
Small-pox, . . . . .	19	26	29	24
Diphtheria and membranous croup, . . . . .	8	7	7	3
Erysipelas, . . . . .	14	18	18	17
Scarlet fever, . . . . .	68	86	47	59
Typhus fever, . . . . .	1	...	...	...
Enteric fever, . . . . .	17	24	19	11
Continued fever, . . . .	...	...	...	...
Puerperal fever, . . . .	2	2	2	...
Measles,* . . . . .	187	192	227	225

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 27th June, 1900.

THE  
GLASGOW MEDICAL JOURNAL.

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No. II. AUGUST, 1900.

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ORIGINAL ARTICLES.

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EVOLUTION AND NATURAL SELECTION: THEIR  
ASPECTS AND PROSPECTS.<sup>1</sup>

By WILLIAM WALLACE, M.A., M.B., C.M.,  
Lecturer on Dental Anatomy and Physiology, Glasgow Dental School.

MR. CHAIRMAN AND GENTLEMEN,—In promising to give a paper this session to your Society, I had in mind to point out that the significance of the ideas of evolution and natural selection has been unduly exaggerated, and I should have illustrated and defended this position by reference to the teeth. I have, however, changed my intention, and will endeavour to treat the subject from a broader standpoint. I shall place before you, briefly, a variety of arguments for holding that evolution and natural selection have not the importance and wide applicability in the world that the teachers of these ideas and their followers suppose them to possess, and I hope to find that you will admit that my contention is in the right direction, whether you wholly agree with me or not.

I departed from my original intention of illustrating my opinion by reference to dental phenomena, not because that evidence does not exist, but because in recent years very little, if anything, fresh and important has been written on this interesting scientific theory. As an indication of this neglect,

<sup>1</sup> Read to the Glasgow Dental Students' Society, 6th April, 1900.

I found, on applying to the librarian of our University, and at various other sources of information, that the pursuit of this subject has been almost wholly abandoned.

As the present lack of interest in this subject turned out to be even more acute than I had anticipated, for I was not in any way unaware that it was suffering from considerable neglect, I thought I might, in passing, take this fact into consideration in my paper, as it afforded me an opportunity of showing why this very event should have been expected by anyone who had taken a proper view of the importance of these ideas. While I wish you to remember at the same time that I think that there is at present an undue lack of interest in these subjects, partly due to the natural reaction from the furor with which they were treated about the middle of this century, and partly to the neglect from which all philosophical subjects are suffering at present, I should like you to notice also that the difference of interest at the present time, as compared with that of the recent past, is also merited, and it is in this respect that the difference chiefly concerns us, and this is due to the fact that these ideas have scarcely a tithe of the scope and application that their chief exponents claim for them.

It so happens, then, that scientific essays are out of the fashion at present, and time is spent more profitably at other subjects. This state of matters will probably continue until the flood of unreflective effort, which is inundating us, checks itself by overflowing. I am therefore unfortunate in my choice of subject, both from its nature and the time chosen to speak about it.

The present undue development of the practical side of human nature has not yet quite outgrown itself, but, in turn, we shall have a time of reflective mental activity as distinguished from practical mental activity. In this new development there will be a much more perfect disregard for ancient thought as an authority. Our new mental efforts will have a more judicious basis, and, depending on wider knowledge than has hitherto marked similar new developments, we may have a greater revolution in thought than any that has ever hitherto been witnessed. The vast amount of substantial organisable knowledge, which lies waiting organisation, should become the basis of a philosophy, that if it meet the requirements of an age of great material and secular advancement, should be a much more truthful interpretation of things in general than any hitherto formulated. Having lain fallow for some relatively considerable time, we

may trust to the future that the new seed, which should already be showing signs of germination, will yield a fair and full harvest. In some respects we shall have to look for disappointments. The rival evolution theories—I mean the English scientific or materialistic interpretation on the one side, and the German historo-spiritualistic on the other—shall suffer an unexpected neglect. It should be constantly borne in mind that just as we regard primitive and erroneous many of the theories and practices of former times, so will those who live after us look on our theories and practices. Whatever small permanent factor of truth may be gleaned from it, evolution will be regarded as a doctrine peculiar to, and characteristic of, this century. It is in anticipation of this change of mental attitude, that is at present slowly developing, that I have ventured to direct your attention to this subject. Perhaps I am rather sceptically inclined, but the doubt that I early conceived that these ideas had not the broad and deep application to organic and human affairs as had been claimed for them, ultimately ripened into disbelief. I shall endeavour, therefore, to sketch for you what appears to me to be some of the chief reasons for holding this unusual opinion.

To bring the ideas of evolution and natural selection conjointly under an adverse critical review is a rather comprehensive task, as one has a much wider field of application than the other. Yet, perhaps, it may be convenient to treat them in this manner, for it may be said with justice that evolution is nothing without natural selection, and that natural selection is nothing without evolution. In considering them conjointly, any strictures upon them must apply to the narrowest as well as to the broadest standpoint in which they may be regarded. Natural selection is like the gardener in the well-kept policies—he adds law and beauty, giving specific character to the living forms in nature, which otherwise would have grown with wild indefinite luxuriance.

It was because natural selection gave promise of a rational explanation of the existence of specific forms that characterised the products of evolution that it was received with such acclamation. A group of living beings formed a series, the series being recognisable through a gradation of resemblances and differences, the highest members of which were evolved and descended from the lower members.

Natural selection afforded a principle by means of which it was possible in a rational manner to ascend the scale. It is quite obvious, however, that natural selection does not supply,

but pre-supposes, the creative power by which the fitter is produced, although frequently, by some curious confusion of thought, it is supposed to create the fitter. It merely acts thus, that some fitter appearing from whatever cause these most likely will survive or be selected. The fitter are produced by some still unexplained agency. It should be definitely recognised by everyone that indefinite, or even infinite, variation does not imply that a certain required characteristic will come into existence. The letters of the alphabet thrown up, no matter how often, never fall down in words, much less in sentences; but if there are no sentences, how can we choose the true from the false? Yet the alphabet is simpler than living organisms. So also with the dice; the maximum number they may turn up is twelve, by no chance can that number be improved upon, so thirteen never occurs. A variation does not comprehend an improvement; something better, however little, that was not implicitly there before. If there should be any improvement, a creative power is necessary. Even to preserve vital phenomena as they at present are, would, if current ideas of biology are correct, require a conservative agency. The bettering, or creative power, has also to contend with degeneracy or a tendency to retrograde. I altogether deny these abstractions of modern biology, the constructive power that introduces improvements and leads to advancement, a conservative power, heredity, that maintains an even tenor in living beings, and the tendency to degenerate whose constant insidious onslaught is only with great loss of life combated by the other two. But it is with the creative power attendant upon evolution that we are here chiefly concerned, and a creative power and a thing created introduce into the universe a duality that is self-destructive. The evolutionist, therefore, falls into the very error to avoid which he invented the theory of evolution.

The error in the evolutionary, as in every other theory of creation, lies in this, that it is assumed that nature was at one time in an inferior state, or in a state that may appropriately, as is usually done, be called a chaotic or nebular condition, and that it now exists in a higher state. There has been, and is, some force imposing upon the raw material, something that was not part and parcel of it before. The implicit or explicit assumption of this force still leaves the nature of this force for explanation. Hence the argument of creation by evolution is no further advanced than it was before by a special act or by special acts of a higher power. It is to no purpose to say that the creative power acts so gradually that the increments

cannot be directly measured. It is not the measurement that is in question, but a logical account of the improvement that is said to have taken place.

In its widest application and original intention the theory of evolution was meant to replace the old beliefs in a special creation or special creations, and it turns out that the difficulty is merely obscured, and a creative power with a different mode of action is assumed, and no explanation of the creative power given. The creative theories of the universe are explanations that require interpretation.

The postulate that there must have been a creation, whether slow and gradual or definite and quick, is an assumption unsupported by the principles of logic, and, when its nature is properly understood, has none of the characteristics of a self-evident truth. That at one time there must have been a creation is merely a delusion. On what ground does this belief depend? The ancients, or primitive man as he is now called, after his own style of interpreting phenomena, asserted that there must have been a creation. The ancients had extremely primitive notions of themselves and their surroundings, and still more primitive were their notions of the immediate and remote past. Their knowledge of the history of the globe would have been utterly worthless for us to form deductions from. In other words, they had no inductive knowledge of the nature of being in the immeasurable past. Hence their wording of the system of the world shows that their ideas of time and space were both primitive and, within the limits of their observation, defective. It was a mere guess whether or not there was a creation; they guessed wrongly. Their interpretation of the nature of physical forces was also fantastic. That these people should pronounce a dictum that should stand for all time—the dictum, namely, that there was once chaos or its modern equivalent, that there was once a nebular universe, and that all things had to be accounted for either quickly by special acts or slowly by a continual process—would be strange indeed. But the fascination of this childish idea is so great that it dare not be impugned, and even the evolutionist would not think of doubting it, except in so far as the intuitive belief in the eternity of all things expresses itself inarticulately both in daily life and in philosophy.

This primitive assumption that the universe was once a profitless waste of endless dust has had almost universal and exclusive recognition. But for the innate belief in the eternal pervading all things, there seems to be little hope that the conception will ever be established that the universe has

always existed in a state of law and order, and organically equivalent to its present condition.

The creative theory, however, is now not so all embracing as it once was. Once upon a time it was thought that time, space, and matter were the subjects of creation, and, if need be, might be blotted out. As, however, even now it cannot be said that there is any data which formed a basis of belief universally agreed upon by all systems of philosophy, we only refer to these ideas here in an opinionative manner. In relation to evolution and natural selection we mention time, space, and matter merely to say that we are of opinion that organisation also has this characteristic in common with them, namely, that it never was created, but is eternal and co-extensive with time, space, and matter.

It is said that the Greeks, with their intuitive insight into external nature, emancipated matter from the finite, and proclaimed it eternal and indestructible, and subject neither to addition or diminution. So far as this analysis of the fundamental characters of matter is concerned, the Greeks were not misled by certain sense impressions, and certain changes that matter is subject to, into the otherwise general error that matter could either be created or annihilated.

The truth that matter is eternal and indestructible has to be kept separate from the special doctrines concerning matter of those Greek philosophers, chief of whom were Leucippus and Democritus, who propounded the atomic theory of the universe, and attributed to matter certain creative powers that it does not possess. Not content with bestowing eternity and indestructibility upon matter, the Greeks, as was the characters of their minds and the fashion of their age, deified matter and gave it creative powers that were wholly gratuitous. The expression for the supernatural power that is attributed to matter is current among us still in the phrases "fortuitous combinations" and "its spontaneity." The qualities of matter have come into operation in the different stages of evolution, and account for them! The chief modern development of the atomic theory centres round the chemico-physical explanation of the origin of life. Reason and observation have offered us a dilemma; the alternative to choose from never before was so evenly contested between preconceived ideas and pure logic.

"Geological considerations on the one hand, and that branch of experimental biology which relates to organic cultures of micro-organisms on the other hand, limit the problem; and, from time to time, the limits of the problem have been

narrowed down in both directions. The period at which the earth became cool enough to be compatible with the existence of living beings has been gradually reduced from countless millions to approximately thirty millions of years. Likewise, in the study of organic cultures, it has become all but universally accepted that in a sterilised and protected medium life never begins to exist. The earth, then, if this reasoning be correct, at a comparatively recent period, in virtue of its own high temperature, must have been devoid of life. No sterilisation could have been more perfect, yet, unlike the sterilised medium, the earth becomes a hot-bed of life. But on a sterile and isolated medium life never originates—life presupposes pre-existing life. If these data are true, instead of there being life, there should be no life on earth. Either it must be admitted that the antecedents of the earth have always been compatible with life, that life is eternal, or the dictum that life presupposes life is only a relative and not an absolute truth. From the nature of the subject, the condition of the earth and solar system at vastly remote periods is a matter for conjecture; nothing is known, the observations and experiments, however, disproving abiogenesis have culminated in one of the most certain triumphs of the inductive method."

There is another method of stating the argument against those who believe that the manufacture of life, or the artificial formation of living corpuscles, is theoretically a problem of chemical synthesis, and its advent merely a question of time. "Men at all times have busied themselves trying to create something with this characteristic of automaticity, trying to invent a machine or body with perpetual motion, to resemble the automatons referred to—namely, living beings. It is needless to say that this is impossible and absurd. Yet this infatuation has played an important part in the advance of science, and exists at present more widespread, and in a more insidious form, than perhaps it ever has done in the history of science. Chemistry and biology are corrupt with it. There is scarcely a chemist but believes that biology is merely a domain of chemistry unexploited, and there is scarcely a biologist but admits this. Both think it but a question of time until chemical synthesis of carbon compounds eventuates in the creation of a chemical automation. Thus we are trying to accomplish with chemicals what in earlier times was fashionable to attempt with clockwork. Even Newton is said to have been touched with this phantasy. The idea that living beings can be created *de novo* by nature or by art is



nearly as common as it is absurd. But let us suppose that synthetic chemistry has reached such perfection that an organism has been formed. If it were inferior to existing organisms, it would be useless; if it were equal, it would be superfluous; and if it were superior, it would be dangerous. So that the consummation of chemical synthesis points to no good. Yet we, who laugh at those of a former age who attempted to get perpetual motion out of clockwork, try to construct automata out of chemicals. Chemical processes are essential to life—there are other factors essential to it."

The properties of matter are not the cause of the origin of life. Slowly and surely we will come to recognise that organisation, like matter, has always existed, that it is a constant quantity amid the multifarious changes that it is subject to, and that it is as impossible to create, or to destroy, as matter itself.

The organic history of the globe and universe needs revision, and, as we revise it, we find that, although time obscures the law and order that pervades it, and as by scientific methods we can, as it were, bring the past before us, we find that the same law and order reigned then as now. The apparent want of law and order in the lapse of time is apparent, and not real. The universe has always existed as an infinite and organic being, and it is impossible to represent it as having an absolute beginning, or arising out of a disorder or chaos. Just as we appear to build our own existences from indefinite or negative beginnings, so, after a similar fashion, do we picture things in general arising and corresponding likewise to our present state of advancement, and imagine that the earth, and even the whole universe, has reached a higher status than it ever before had the honour to attain. This analogy between the universe and man is misplaced.

The terms development and evolution may be applicable to a series of organic changes, but these changes should be distinguished from the organisation, not confused with and mistaken for it. The terms composition and decomposition are descriptive of chemical processes; the matter involved is not composed or decomposed. A chemical synthesis or analysis relates to a simple change in the form of matter, not to its creation or destruction. So also the development of a form of life, or the evolution of a period of history, merely denote a definite and co-ordinated series of changes applicable to objects already organised.

Passing now to the narrower subject of natural selection or

Darwinism, in the strict sense in which this word is used to designate a certain biological process, we come to an idea that among the educated has had a very wide acceptance, and among scientists its acceptance has been almost complete. A synonym for this phrase, introduced by Herbert Spencer, and accepted by Darwin as even preferable to "natural selection," is the phrase "survival of the fittest." As scientific terms they are equally defective, both implying the existence of a discriminating agent instead of indicating a natural fact or process. There is practical unanimity, however, as to the meaning of these phrases. Although Malthus' work on population is said to have suggested the idea, as a social fact Gibbon had already used the principle; indeed, almost every historian of note had previously done the same. And, as regards human affairs, both the history of philosophy and poetry shows that it had been the common property of reflective minds. Darwinism is the application of this principle to all living beings, and we wish to discover whether this application is just or not. The historian and the war poet, in their descriptions of the internecine struggles of man, associated a valour or superior value with the victor by which he was distinguished from the vanquished; and now the evolutionist, to explain evolution, associates with the struggle for existence a fitness which raises from the dust beings whose main boast or exultant cry is the chasm or differentiation that distinguishes them from the dust. The evolutionist must needs walk on the ground, but sees not the necessity therefor. To use a pathological comparison, for the evolutionist, the cripple and the crutch does not form a unity, but is an object for compassion or derision as sentiment moves.

The idea is clear and definite, and logically expounded by Darwin himself. It may be said with justice that the idea had at least no definite place in biological science before Darwin's time. Among reflective writers its opposite, indeed, was as often insisted upon, perhaps with a substratum of irony in that the "good die young" rather than that they survived. It may be noted, however, that certain Shakespearian sonnets, such as the following lines, have expressions more in consonance with the Darwinian dictum:—

"Let those that were not made for store,  
Harsh, featureless and rude, barrenly perish:  
Look, whom she best endowed, she gave the more;  
Which bounteous gifts thou should'st in bounty cherish:  
She carved thee for her seal, and meant thereby,  
Thou should'st print more, nor let that copy die."

If the theory of natural selection is a substantial addition to science and philosophy, such poetic and fitful prognostications of it would not detract from the originality of Darwin and the others associated with him in bringing the theory before the world for universal recognition. It is this pure Darwinism or natural selection in the struggle for existence that we wish to criticise, and dismiss all other factors, whether proposed by Darwin himself or other evolutionists as causes of evolution. These other factors have, for the most part, been discarded by evolutionists themselves; at anyrate, it is a general truth that there is no unanimity among them except as regards this natural selection or survival of the fittest. We have to consider whether this Darwinism, which is held to be an impregnable position by evolutionists, is so logically invulnerable as its upholders believe. It is supposed to have withstood the friendly criticism of all those who were disposed to sanction it, as well as the adverse criticism of those who considered it an enemy of their most cherished beliefs. We have thus a doctrine, maintaining its identity and character at the present moment, virtually the same as it was when it came into existence half a century ago. It is almost futile to demur to such a belief. The idea of natural selection, however, requires to be fitted into one's conception of nature in general, and it is in fitting it into its place in one's general belief that we think that it may be found to have less biological importance than has hitherto been entertained for it. Indeed, a belief is worthless, or almost worthless, unless it is in conformity with our other general beliefs. It may be extremely interesting and amusing to juggle, with unerring precision and without mishap, with ideas in mid-air, but there comes a time when this display has to be given up. All ideas are ultimately found to depend for their stability on certain universal relationships. Every idea forms with all other ideas an organic whole. The reasoning and conclusions in the origin of species have all the appearance of logical validity; but immediately when, as now and again happens, there is an attempt to connect the theory with the other concrete facts of nature, the impossibility to do so manifests itself, and a return is made to the abstract process.

Natural selection was received with critical acclamation, as it filled a gap or supplied a want; it was supposed to give definiteness to the hitherto indefinite idea of evolution. Not to speak of the *scala natureæ* of the Greeks and Romans, since the writings of Lamarck, Geoffrey St. Hilaire, Kant, Oken, and Goëthe, evolution had become the fashionable creed of the

advanced school of biologists. Indeed, it was generally recognised that living beings were united by a genetic bond. Yet the want of a rational explanation of how to get up the ladder made the advocates of evolution feel that they were as far off the final explanation as the advocates of any other theory. It is only too obvious that natural selection does not explain the cause of evolution, and evolution does not explain the world in which we live. The examiners that pluck and pass the candidates are not the cause of the advance in knowledge, nor is the teaching of the schools the explanation of the intelligence of the students. Natural selection is ostensibly a formal process, and, acting as it is assumed to act, it merely stops some and lets others pass; it is not the cause of the good and bad.

Natural selection presupposes at least three biological processes, viz., the reproductive power of living beings, variation among their offspring, and a necessity for adaptation between organism and environment. Briefly stated, the process of natural selection consists in this, that the rate of multiplication of living forms is such that they soon exceed the capacity of the earth to support them with nourishment and to afford them sufficient space. As a necessary result some must perish, and, as no two offsprings are absolutely identical, nature is supposed to take advantage of whatever difference there is, and pronounces some better, who are known to be so in that they survive, and some worse, who are known to be so in that they perish.

Reproduction, or the geometrical rate of increase of living beings, is one of the factors that lead to the possibility of natural selection. But how do living beings come to have the power of reproduction at all, not to speak of an excess of it. Before a struggle for existence could ensue, the function of reproduction must not only have asserted itself, but invaded and usurped the assumed heretofore peaceful balance of power that characterised the state of nature. The evolutionist has as yet given us no even plausible account of this phase of life history, by which reproductivity insidiously assumed a tyranny over nature, which may be well called illicit, if we also may be allowed to speak in the anthropomorphic manner in which it has been the custom of man to explain the laws of nature since his earliest attempt till now.

If the function of reproduction is one of the essential characteristics of living beings, and comes into existence without the aid of natural selection, it is necessary to analyse the phenomena which has been supposed to be due to natural

selection in the light of the function on which natural selection depends. This appears to be an instance of the argument *falsus in uno, falsus in omnibus*.

In speaking of evolution in general, I pointed out that it was impossible to secure an improvement or better adaptation merely by bringing into existence variations of form; that, if specialised adaptations were to be made, a special power extraneous to the organism, or a special adaptive function in the organism, must be assumed, or both. Take, for instance, such a simple adaptation as the wheels of railway carriages to the rails, and the rails to the wheels; not only must the wheels be true in every phase of a revolution, but the rails must be of the same gauge throughout. It must be obvious that selection would be a futile process even were the country covered with rails and vehicles with wheels, that, not only would there require to be adaptation, but co-adaptation. But the co-adaptation between the organism and its environment is infinitely more complex than the subject of the illustration just given, and this relationship has appeared as a definitive problem of philosophy since the earliest times. The evolutionist explains it by fortuitous variation, which method at least has no logical foundation. The manner in which it is customary to propose this problem is whether the organism, man, has been adapted to his environment, or the environment to man. The earlier method of conceiving the problem was that the environment was modified to suit human requirements, as man was the organism *par excellence*. The co-adaptation being accomplished by an infinite power, and thus the finite duality of organism and environment was reduced to an infinite unity. In these days it has been fashionable to regard the organism, man, as adapted by a long evolutionary process to his environment, which is considered as a constant quantity. The unifying factor by this method is equally inscrutable and unaccounted for, but the evolutionist does not see this essential detail.

A brief inquiry into the facts involved will show that the notion of adaptation, whether of man to the universe or universe to man, is equally erroneous, and the inquiry will reveal that both merely form an organic whole, that either is merely part of the other. While doing this we may remark, that the evolutionists, like the others who have invented theories of creation, have fallen into an error of abstraction in opposing the organism to environment, instead of regarding them as one, or as parts that make up one.

While the selection and preservation of the more suitable

appears an acceptable and perhaps even fascinating argument in itself, when we turn to Nature and observe her carrying her theory into practice, she carries out her work as if she wished also at times to impress us that she was acting merely with a free hand, and not with the restraint that this law should appear to impose upon her. The teeth, for instance, are preformed, and therefore for a time useless, and, in some instances being bulky, would tend to degenerate rather than to develop, as is the case with organs called rudimentary, which are said to have degenerated because they *were* useless; so, on this theory, to some extent, all teeth should have a tendency to degenerate while they are lying preformed but unerupted and functionless.

Another class of cases which strikes us most forcibly of the unintelligible caprice of natural selection is illustrated by the sudden extinction of such forms of life as the gigantic mammoth. After exercising for ages a stern preference for these forms of life, nature suddenly turns upon herself, to proclaim that what was at one moment eminently fit for existence, a moment after is totally unfit. Yet the capriciousness of natural selection, exemplified in the becoming extinct of highly specialised and differentiated forms of life, is exceeded by a lavishness of sacrifice of embryonic and juvenescent forms. Physiology explains that, were all the ova of almost any marine form of fish to reach maturity without any of them suffering destruction, the whole of the aqueous globe would, in a few months, be transformed into a living mass. That superiority or inferiority of nature could be detected and selected is extremely difficult to conceive; at least it seems probable that the interpretation of these phenomena has not yet received an adequate expression. From an experimental point of view, a superabundance of living forms necessitates the wholesale and indiscriminate destruction of the excess, without the possibility of selection taking place. The small remaining moiety continue to exist by a chance that is also a necessity on this earth here. From the nature of the seasons, it so happens that, at one time of the year, more life can be sustained than at another; hence a wholesale destruction of life takes place at that season which is antagonistic to life. No animal has yet come into existence, and, from the nature of the case never can, that can adapt itself to the seasons, and continuously increase, so that life varies in amount as the season affords opportunity for increase. Animals cannot be selected in this wise to suit the seasons, although the seasons have been acting long enough on life to produce an impression,

if any impression were possible. To live to suit the seasons, or to become adapted to the seasons in respect of bulk, involves a contradiction of ideas, and it therefore can only be those that are preserved by accident that survive the seasons. If animals increased and diminished in bulk to suit the seasons, we would have an increase and diminution of living matter, but a diminution of living matter is loss of life, so our imagined solution of the problem of the adaptation of individual forms persisting in this fashion through the seasons, is an absolute fiction. In short, year in and year out, other conditions remaining the same, life increases and diminishes with the seasons, and is the same in amount at any corresponding times. It is obvious, therefore, that the seasons, which may be said to be the fingers of the right hand of nature, with which she marks for life or for death the living beings of the world, are fingers that they can neither escape from, nor adapt themselves to, and the same principle applies to the other factors that appear to favour or frown on life, according to the attitude in which they stand to life for the time being.

For the purpose of a true interpretation of nature it is impossible to isolate environment and organism, and this may be readily illustrated by reference to some instances of selection and adaptation reviewed by the evolutionists themselves. The interdependence in a variety of instances of insects and flowering plants shows that the individual organisms in these instances make up an organisation that have to be considered together, each being part of the other's environment, and they have their relations to their so-called environment besides.

But this suggestion of unity by association of two or more organic individuals points to the necessity of including all organic individuals in the organism, and what was called a subtle piece of biological interdependence, unravelled by Darwin, namely, the organic relationship between the harmless necessary cat, field mouse, humble bee, and red clover, shows that the demarcation between organism and environment is purely fanciful, and that they are merely parts of a whole. The impossibility of rightly interpreting life by severing the organism from its environment is perhaps best illustrated in the case of man, in consideration of which the unification is for us the simplest and most obvious. Thus it may be shown if, indeed, cultivated plants and domesticated animals are dependent on man, so likewise is man dependent on them. Without the one the other would perish. With as much logical force may man, cultivated plants, and domesticated

animals be considered as an organic unit, and opposed to its environment, as any specific form of life.

Such a mode of looking at this organic combination is still a pure abstraction. If, as is true, every organ of the body is related to the whole body, and if they are interdependent, so also is every organic being to the universe, and the universe to them. Both man and the organic forms, to which he is more obviously organically related, and the organic forms to which he is less obviously, but still as necessarily, related organically, and, indeed, with the universe itself, form but one organic whole. Indeed, in philosophic and scientific writings, of whatever pretensions and scope they may be, we are continually being reminded that there is some factor, each man pointing out his own subject as relating to the most essential element, that life could not exist without. Each invidiously claims precedence for his part, just as if in a chain individual links might contribute specially to the integrity of the whole. But it should be the first axiom of philosophy, instead of the conclusion of a weary explanation, that every part of the universe is essential to its own conception. Two days ago it was the temperature, and we were warned that the earth will soon be too cold to live in; yesterday it was the oxygen that will go done first; to-day we are told that danger to all life is imminent from the rapid depletion of nitrates; and thus the disjointed science of the times is scaring us with that last day that never comes more persistently than the old wives' warnings of that event in the days of our childhood.

The individual is an abstraction, and is a part, and the rest of the universe is a complement or the other part which makes up the world. This axiomatic conception has already been pointed out in regard to subject and object by a certain modern school of philosophy as having also some significance beyond that which concerns us here, but we have to consider this axiom not only now and here, but also in regard to time, *i.e.*, as coming into being as well as existing.

The principal words in general to indicate the process of coming into being of organic entities, are genesis, evolution, descent, development, and genealogy. The genetic affinity or descent of an organic being is determined by tracing its antecedents in time past, and every organic being has of necessity a genealogy. While we know of no organic being without a genealogy, it is also impossible to conceive of such without a genealogy. And this leads us to restate the axiom that the rest of the universe is the complement of any part of



itself. Genetically, therefore, every organism is the genetic complement of the rest of the universe, so that, expressed in terms of duration of time, every organism continues to exist in virtue of the rest of the universe continuing to exist, not in virtue of a quality of a part, but in virtue of the organic and reproductive nature or pre-existence of the whole.

It is scarcely possible to exaggerate the importance of recognising the truth of this axiom of philosophic biology—that the universe is not only an organic, but also a genetic, whole. It is carefully to be guarded against the notion that any absolute betterment is taking place in nature, and that whilst a betterment, progress, or civilisation may be attributed to human affairs and purposes, that such is applicable to nature at large is a misconception, and has no evidence as a scientific conception. Even in human affairs it is impossible to climb without a footing, but the goal exists prior to the ascent. But in science the proper effort and the attainment are one and the same.

Let us treat, again, the antagonism between the geometrical increase and the inevitable destruction from want of space and food to which living beings are exposed. From another point of view, let us suppose that the seasons permitted a still greater latitude or opportunity for life at one time, and greater hostility at another. This is a quite conceivable set of circumstances. It is here, again, obvious that the Darwinian selective influence, as it is called, would be at work, and, according to the argument itself, would do more work. It may well be questioned whether the apparent adaptation that exists could come into being. There would be modifications. Specialisation would of necessity either be enhanced or impeded. The destruction, therefore, of specialised forms is a necessary consequence of their selection. The forms that continue to exist would therefore be those that escaped destruction by accident, and those that escaped by accident would leave progeny that, in a sense, would grow further in specialisation than their ancestors, and so on in any particular line of development.

It may be noted here that the forces which destroy life are active. The destructive force passes over the territory that it acts upon rapidly. The vital force acts at the place it happens to be, and remains stationary. All the lower forms of life, and all plants, may be regarded as stationary and absolutely passive.

I have brought together a few initial reasons in a somewhat

haphazard fashion for demurring to opinions that are widely held at present, partly from the fascination of the reasoning by which they have been enforced, and partly on account of the compatibility of the doctrine with the sentiment of the age. In order to enforce the following general truth upon you, that of the two attitudes of thought, namely, the credulous and the sceptical, that contrary to general teaching you are better to assume the sceptical than the credulous attitude of thought; that it is a mistake to consider scepticism as a negative attitude of the mind; that it corresponds to the zinc or positive pole of the battery; that with it mental activity has generated; and that credence and belief correspond to the carbon or negative pole, where there appears to be no activity. There is much less danger of the zinc pole of scepticism becoming encrusted with sophism than the negative pole of credulity becoming moribund by traditional belief.

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## NOTES OF EIGHT LABOURS COMPLICATED BY TUMOURS.<sup>1</sup>

By ROBERT JARDINE, M.D.,

Physician to the Glasgow Maternity Hospital; Examiner in Midwifery to the University of Glasgow.

WITHIN the last two years or so I have met with a number of cases of labour complicated with tumours. The condition is one of sufficient rarity to warrant me in placing the cases on record.

### PAROVARIAN CYST.

CASE I.—Mrs. T., i-para, æt. 25. When first seen this patient was well on in the first stage of labour. The head was partially fixed in the brim. Immediately below the promontory I felt a flattened-out cystic tumour, about the size of a small orange. It could be very distinctly felt through the rectum. Dr. Fortune, who kindly gave  $\text{CHCl}_3$  for me, examined her, and confirmed my diagnosis. It seemed to me to be a simple thin-walled cyst, probably a parovarian one. The obstruction was not very great, but the cyst could not be

<sup>1</sup> Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 28th March, 1900.

pushed up past the head, as it was caught below the promontory. As there was room for the head to pass, I decided to use forceps cautiously. Keeping my finger against the cyst, I made traction, and suddenly felt the cyst disappear. It had ruptured. Delivery of a live child was easily effected. The patient did not suffer in the least from the sudden rupture. She made a good recovery.

I think the result showed that the diagnosis of a parovarian cyst had been correct. If it had been larger I would have tapped it through the vagina. The result could not have been better, but still it was a somewhat risky proceeding.

### OVARIAN CYST.

CASE II.—Mrs. S., i-para, æt. 30. I first saw this patient, in consultation with Dr. D. Christie, when she was about eight months pregnant. She had a tumour of the right ovary, about the size of a large orange. It had a fairly long pedicle. No inconvenience had been experienced from it until a day or two before I saw her, when she had been seized with severe pain after doing some heavy work. Dr. Christie found that the tumour had slipped down in front of the uterus. He was able to push it up. When I saw her the tumour was well up, and quite movable. The pain had lessened considerably. It looked as if there had been some twisting of the pedicle, which had been relieved by replacing the tumour.

The question we had to decide was whether or not to operate. If the pedicle was twisted, an operation was called for at once; but as there was no increase in the size of the tumour, and the pain had almost gone, while the temperature and pulse were all right, we decided to wait, and watch the patient carefully. Dr. W. L. Reid saw her, and agreed that we ought to wait.

She went on to full time, and I delivered her of a live child with forceps without any difficulty. She made a good recovery.

Twisting of the pedicle is a very common accident in such cases. When it does happen, an operation should be done as soon as possible. In many cases the pregnancy is not interfered with. In this case it was fortunate an operation was not necessary, because, even if she had gone to full time, the abdominal cicatrix would not have been very firm, and it would have yielded.

## SUPPURATING DERMOID OF LEFT OVARY AND OBSTRUCTION OF THE BOWELS FROM ADHESIONS.

CASE III.—Mrs. M'C., æt. 39, xix-para. This patient was brought to hospital in a very collapsed and hopeless condition. She had been in labour four days, and during that time there had been no movement of the bowels. The abdomen had been steadily increasing in size, and vomiting had been incessant for the last day or so.

She was seriously collapsed, with a very feeble pulse and a pinched expression. The abdomen was extremely distended. No distinct tumour other than the uterus could be felt. The os was partially dilated, and the head presenting. The vomit was distinctly fæcal.

I dilated the cervix manually, and turned the child. Its heart was beating, but we could not resuscitate it. The patient's pulse became very feeble, but strychnine hypodermically and a large saline injection under the breast strengthened it considerably. A very large enema was given after delivery, but failed to move the bowels. An oblong, indistinct swelling could be made out to the left of the uterus, but it was impossible to say whether it was a tumour or distended bowel.

Two hours after delivery I opened the abdomen. A large number of adhesions were found. To the left and above the uterus an oblong cyst of the left ovary was discovered. It was firmly attached to the bowel by numerous adhesions. The bowel was narrowed for 1 inch to about half its lumen about 2 inches above the adhesions. It was very dark in colour. In separating the strongest adhesion, the cyst wall, which was very friable, gave way, and fœtid pus escaped. The abdomen was well flushed with normal saline solution, and a large quantity of the solution allowed to remain in the peritoneal cavity.

The patient regained consciousness, but never rallied. She died six hours later. I reopened the wound after death, and removed the bit of bowel. It was quite patent.

We afterwards learned from the friends of the patient that early in the pregnancy this tumour had been discovered at the Victoria Infirmary, and she had been strongly urged to have it removed, but had declined. It is difficult to understand why the patient and friends delayed sending for assistance, and also refrained from mentioning the fact of a tumour having been diagnosed months before.

If she had consented to having the operation early in pregnancy, or even if she had come into our hands four days sooner, she would probably have been saved.

The tumour was a suppurating dermoid of the left ovary. There were several tufts of hair in it, and one tooth in the wall. The pus in it was extremely foetid.

#### FIBROID TUMOURS.

CASE IV.—Mrs. D., i-para, æt. 32. I saw this patient in consultation with the late Dr. Turner. Prior to her pregnancy she had been under his care for fibroids of the uterus. There were several tumours throughout the uterine wall. When I saw her the os was fully dilated, and the head presenting. Under  $\text{CHCl}_3$  delivery of a live child was effected by means of axis traction forceps. When the placenta came away, the entire chorion was left in the uterus. I found it was adherent all over, and it was necessary to remove it bit by bit. The bleeding was free, but not at all alarming. It was completely checked by a hot douche and a hypodermic of ergot. She made a good recovery.

CASE V.—Mrs. J., i-para, æt. 38. I saw this patient in consultation with Dr. McMillan, sen., of Pollokshields. Dr. McMillan, jun., was her usual attendant, but he was absent on his holidays. We found the uterus was very large. At the upper part there were two distinct rounded masses, which felt very like foetal heads. A breech was presenting. It looked very like a case of twins. Under  $\text{CHCl}_3$  I delivered the child alive without much difficulty. It was an extremely large child. The second mass in the uterus was evidently a fibroid. As the placenta could not be expressed, I passed my hand into the uterus and found there was a second fibroid, low down on the posterior wall, blocking the way. I removed the placenta, and found the chorion was adherent all over. It had to be removed in strips, as in the last case. The lower fibroid was about the size of a large fist. It was submucous, and I could easily have shelled it out, but I decided to leave it. The upper one was a subserous one. There was no great loss of blood.

The patient made a good recovery. She seemed to be quite unaware of the presence of the tumours.

CASE IV.—Mrs. H., v-para, æt. 36. This patient was sent into the hospital with a history of pretty severe ante-partum hæmorrhage. The bleeding had commenced in the morning,

and had continued more or less throughout the day. She had evidently lost a good deal of blood. Her pulse was 144, and the temperature 97.2°. The cord was prolapsed and pulseless.

On examining her, I found the cervix dilated, and the head partially engaged. To the right and behind the cervix there was a flattened-out tumour partially blocking the passage. It felt very like a fibroid in the posterior wall of the cervix. Delivery was effected by forceps after perforation. If the child had been alive I might possibly have delivered it with forceps. A hot douche checked all bleeding. She was stimulated with strychnine hypodermically. She made a good recovery.

Dr. Edgar examined her with me on the seventh day of the puerperium. We made out the tumour to be in Douglas' pouch. It seemed to be a fibroid, but possibly might have been a dermoid of the ovary. We advised her to go to the Samaritan Hospital, but after she went home she said, as she was feeling quite well, she did not see any necessity of having an operation done. If she again becomes pregnant I hope she will have sense enough to come into hospital as soon as labour sets in. If it is a fibroid, it will in all probability increase in size and form a very serious obstruction.

CASE VII.—Large fibroid completely blocking the brim of the pelvis: Porro's operation (see *Glasgow Medical Journal* for September, 1899, p. 213).

#### TUMOURS OF THE VULVA—LATERAL PLACENTA PRÆVIA.

CASE VIII.—Mrs. R., i-para, æt. 21, about six months pregnant.

The last case I have to record differs from the others as regards the tumours, in that they were round the vulva and anus. The case is probably a unique one, as it was also a lateral placenta prævia. She had not lost a great deal of blood, so her condition was good.

The whole of the vulva was covered with large warty growths, which also encircled the anus. The mass was exactly like a cauliflower, and larger than a fist. Most of the masses had narrow pedicles, but a number, especially on the posterior vaginal wall, just within the fourchette, were sessile. They were evidently gonorrhœal, and were very septic. They had been growing for about four months.

After cleaning them as thoroughly as possible, I plugged the vagina, and removed the whole of them, stitching up each

incision as I went on. There was free bleeding, but the stitches easily controlled it. As the os was sufficiently dilated by this time, I turned and delivered the foetus. It was alive, but too premature to survive.

There seemed little chance of such a case escaping sepsis, but I am glad to say her recovery was uninterrupted. The temperature remained practically normal throughout. Most of the incisions healed by first intention, except those round the anus.

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### CASE OF SUPERFICIAL EMPHYSEMA OCCURRING DURING LABOUR.<sup>1</sup>

By J. BARR STEVENS, M.D.

THE following notes form an account of a case of a comparatively rare condition :—

On 8th August, 1897, I was called to attend a young woman, aged 20, in her first confinement. All through her life, and during pregnancy, she had enjoyed good health, and was now at her full time. For twelve hours she had been having labour pains, but not of any great severity. On examination, I found the pelvis roomy, the os uteri dilated to about the size of a shilling and becoming softened, the presentation normal. Four hours later the os had become almost fully dilated, the pains regular, frequent, and severe. As the rectum was very loaded, I ordered an enema, and soon afterwards the head descended almost to the perinæum. The pains were then very severe, and the patient was straining to the utmost, holding in her breath and bearing down as strongly as she possibly could. Twice during the acme of a pain I heard a small clicking sound resembling that produced by squeezing in a part of a felt hat and allowing it to spring out again. In spite of the strong pains the head did not continue to advance. Suddenly it was observed by the nurse that the patient's face was swollen. An examination showed that both eyes were almost closed by extensive swelling, which, on touching, I was surprised to discover was surgical emphysema, readily recognisable by crepitation and pitting on pressure. This was present equally on both sides of the face and neck, was also well developed over the upper part of the chest, reaching

<sup>1</sup> Read at a meeting of the Glasgow Medico-Chirurgical Society held on 12th January, 1900.

down behind as far as the top of the crests of the scapulæ, and, in front, slightly affecting the breasts, while it also extended down the right arm for a short distance.

It seemed to me that, whatever was the cause of this condition, the proper procedure was to terminate labour as quickly as possible. I therefore put the patient under chloroform, and, applying Neville's forceps, delivered her of a very large full-time female child, weighing a few ounces over ten pounds. Half an hour afterwards, failing to express the placenta by vigorous pressure on the fundus, with proper precautions I introduced my hand into the uterus, and brought the placenta away. There was only a slight adhesion, easily separable, at the right cornu. As there was a somewhat extensive tear of the perinæum, I put in a couple of silk worm gut sutures. The patient complained of pain at both shoulders, at the sternum at the level of the second ribs, and at the left side of her neck about the level of the top of the hyoid bone. At none of these situations could I discover any evidence of fracture, and the patient had no difficulty in breathing, turning, or moving, as would be expected were a rib fractured.

The patient made an uninterrupted recovery. An anti-septic douche was given every day for three days. The emphysema rapidly and completely disappeared, very little trace of it being evident on the fifth day, and it was entirely gone on the seventh. It disappeared first from the face.

At no time was there the slightest displacement of viscera, nor any evidence of pneumothorax. For four days the patient had slight pain in the throat on swallowing, but there was no spitting of blood. The temperature was normal all the time. One stitch was removed from the perinæum on the fourth day, the second on the eighth day. It healed practically by first intention.

When I met with this case I was not aware that such a condition ever occurred, and I sought as well as I could for some explanation of it. I knew that the most common cause of surgical emphysema was injury of the lung tissue by the end of a fragment of a fractured rib. In some cases the lower ribs have been known to be broken by the violent contraction of the abdominal muscles during labour, but I could make out no evidence of fracture of the lower or any of the other ribs. I then remembered a case of extensive surgical emphysema resulting from a fracture of the larynx, the result of injury following old disease which, while a house surgeon in the Royal Infirmary, I had the opportunity of seeing in Dr. Middleton's wards, afterwards published in the *Glasgow*



*Hospital Reports*, vol. i. In my case the pain at the side of the neck, together with the slight difficulty on swallowing, seemed to suggest some such origin, but there was not the slightest hæmoptysis, while in Dr. Middleton's case this was profuse. The good health which the woman had enjoyed all her life, both before and after her confinement, is also against this view.

Bearing on the causation of such a condition the following sentences from Coats's *Manual of Pathology* are interesting. After defining the two forms of pulmonary emphysema, he goes on to describe the first, viz., interlobar or interstitial, "which it will be seen," he says, "is comparable with surgical emphysema. This form, which is very rare, occurs when the air vesicles are ruptured, and the air escapes into the interstitial tissue. The air vesicles may be actually torn open by a broken rib coming against the lung, or by the lungs being directly wounded. On the other hand, the air vesicles may rupture from acute over distension. Thus it may be the result of very violent expiratory efforts, generally with, but sometimes without, obstruction of the air passages. It has been met with in whooping-cough, in diphtheria, and in violent coughing from the inhalation of irritating material. The violent efforts with closed glottis cause such compression of the air in the alveoli that at some places the vesicles rupture." Then again, "the air sometimes travels along the connective tissue for some distance, just as in the case of subcutaneous or surgical emphysema. It may pass to the root of the lung, and from there up along the trachea and out to the subcutaneous tissue of the neck, and so lead to a surgical emphysema."

Compression of the air in the alveoli, described as the cause of the affection, is not likely to be more marked than during labour, especially in such a case as this, where there were exceptionally strong pains, together with the greater rigidity of the soft parts to be expected in a primipara, so that in the absence of other explanation we may conclude that the emphysema in this case arose from rupture of pulmonary vesicles.

In all, about thirty cases of emphysema occurring during labour have been put on record. The first reported was in 1784 by Dr. Simmons, of London, who described "a case of emphysema brought on by severe labour pains." In later years De Soyre, in the *Gazette des hôpitaux*, Paris, 1864, wrote a paper upon "emphysema of the face and upper part of the

chest produced by violent labour pains caused by rigidity of the orifice of the uterus."

In 1877, Dr. Burton, of Brighton, Massachusetts,<sup>1</sup> reported a case in which he said that at the sterno-clavicular notch he felt the air passing up the left side of the trachea. He discussed three other cases published by Downs, Worthington, and Atthill.

Worthington held the view that the condition resulted from rupture of the upper part of the lung. Atthill, on the contrary, maintained that had this occurred without previous adhesion of the two surfaces of the pleura, thus allowing the air to pass into the subcutaneous tissue of the neck, it would have escaped into the pleural cavity and caused collapse of the lung. Burton himself believed that there was rupture into the posterior mediastinum, and consequent passage of the air into the loose areolar tissue round the œsophagus.

In the *London Medical Record* in 1881, p. 158, there is a summary of two cases<sup>2</sup> recently published—one in Germany, the other at New York. In the first case the patient's face, besides being puffed up, became cyanotic. The emphysema extended above to the insertion of the platysma, and below as far as the third rib, and behind not beyond the anterior borders of the trapezii muscles. For some days there were sore throat, slight cough, and difficulty in swallowing, but no trace of the condition remained in a week. In the second case the emphysema was limited to the same region as in the first.

In 1881, Dr. T. W. Hubbard, of Tunbridge Wells, reported a case<sup>3</sup> in which the eyes were closed by the emphysema. His attention was drawn to the condition by the patient complaining of difficulty in breathing. He had the opportunity of attending the same patient in a second labour, when emphysema did not occur, but he applied forceps, as soon as the os was fully dilated, with a view to preventing it.

The most careful report of a case is given by Boxall.<sup>4</sup> In his case the emphysema became obvious the morning after the labour, and here also it was noticed that it was limited behind by the edges of the trapezii. It extended up to within an inch of the mastoid process. He concludes his report by saying, "in the primiparity of the patient, the severe expulsive

<sup>1</sup> *British Medical Journal*, 1877, vol. ii, p. 663.

<sup>2</sup> Livoff in *Meditz Vestnik*, No. 34, 1880; and Dr. Haupt in *New York Medical Record*, December, 1880.

<sup>3</sup> *British Medical Journal*, 1881, vol. ii, p. 897.

<sup>4</sup> *Lancet*, 1887, vol. i, p. 122.

pains, the onset of the emphysema soon after labour (often during the second stage), its proclivity for the region of the suprasternal notch, the absence of disturbance of the respiratory function and of other serious symptoms beyond disfigurement, together with the invariable tendency to absorption of the air by the end of a week or ten days, my case, though much less severe in character than many, agrees with the majority of those previously recorded."

In 1884, Dr. Francis Champneys, before the Royal Medical and Chirurgical Society, read<sup>1</sup> "An account of an experimental enquiry into the causation of cervical emphysema, otherwise styled emphysema of the neck, occurring during labour and during violent expiratory efforts." This enquiry was complementary to one formerly made on the relation of emphysema and tracheotomy.<sup>2</sup>

In the experiments healthy fœtuses which had never breathed were used. After a summary of the clinical features of the condition and details of the method of the experiments, he expressed the opinion that such cases probably occur once in every two thousand labours, and he came to the following conclusions:—

1. The cause of emphysema of the neck during labour is rupture of the lung tissue; air escaping near the root of the lung, passing beneath the pulmonary pleura into the anterior mediastinum, and so beneath the deep cervical fascia into the neck. This is the same route by which air gets to the anterior mediastinum after tracheotomy, only in the latter case the air travels in the opposite direction.

2. The weakest parts of the lungs are the spaces between the lobules and the fissures between the lobes, especially at the anterior surface of the root of the lung, and here it is that the rupture occurs.

3. Pneumothorax is never associated clinically with this form of emphysema, and when it occurred during these experiments it had nothing to do with the production of the emphysema.

4. To restrain bearing down, as by an anæsthetic, and to hasten labour are sound rules of practice.

It will, therefore, be seen that such a case as that I have described is by no means unique, and that different views have been advanced as to the causation of the condition. At the same time, the cases are not so frequent as to make the report of a fresh one entirely without interest. In my case

<sup>1</sup> *Lancet*, 1884, vol. ii, p. 349.

<sup>2</sup> *Lancet*, 1882, vol. i, p. 871.

the emphysema affected a wider area than any other of which I have seen the reports.

*Note.*—At the Medico-Chirurgical Society, Dr. Munro Kerr drew my attention to a paper by P. Scheffelaar Klots, published in *Zeitschrift für Geburtshilfe und Gynäkologie*. In this valuable paper there are collected reports of forty cases, drawn from various sources, and including most of those referred to above. In at least two of the cases the area affected is more extensive than in my case. Of the forty cases, thirty-one occurred in primiparæ (93 per cent), two in multiparæ, and of the others there is no record in this particular.

There is one case recorded in which a woman with a narrowed pelvis, necessitating delivery by forceps, became cyanotic, had a quickened pulse, and died. "At the autopsy, which took place thirty-two hours after death, there was found no injury of the bronchii or their branches. The lungs filled the chest very completely, and showed all the appearances of a recent emphysema." In this case the emphysema had not become evident in the neck, so that it is scarcely fair to include it in this connection, but Klots holds the opinion that superficial emphysema occurs as a result of an interstitial secondary to a vesicular emphysema, therefore he includes this case because "by showing what changes occur in the lungs it can serve as an example in the explanation of the origin of the condition." Klots discusses the question whether, when this condition arises, there is any evidence of the woman having any predisposition, phthisis for example. He finds that in eight of the recorded cases (1 ? para and seven primipara) the women were not healthy (five of these were reported to be delicate, one had formerly had pleurisy, another hæmoptysis, while in one eclampsia occurred). Of the other cases, three were reported to be strong, and nine very strong. Of the others nothing is said, so that the presumption is that they were healthy, therefore it is concluded that a lung affection or a predisposition is not necessary to the occurrence of emphysema.

"The cause of emphysema is abnormal strength of pains excited by abnormal opposition, *e.g.*, (1) exceptionally large child, with a normal pelvis; (2) narrowing of the pelvis; (3) rigidity of the soft parts; and there are examples from the combination of the two latter."

Klots concludes his able paper as follows:—"In conclusion, one cannot help mentioning that it is my conviction that emphysema has occurred far more frequently than one

would gather from literature. It must seem strange to everybody that, with all the thousands of births where all the conditions necessary for its production are present, no more cases have occurred. Therefore it might not be too rash to take it for granted (1) that emphysema is frequently overlooked; (2) that where it has been diagnosed it has not been understood; and (3) that many cases have not been published."

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## TWO CASES BEARING ON MENSTRUATION.<sup>1</sup>

By E. ARTHUR GIBSON, M.D. GLASG., L.M. ROT. DUR.,

Assistant Physician, Maternity Hospital, Glasgow; Gynæcologist to the Bellahouston Dispensary of Victoria Infirmary; and Obstetric Physician to the Glasgow Training Home for Nurses.

CASE I.—On 27th April, 1899, I saw M. R., æt. 23, unmarried, with her doctor in consultation. The history I received was as follows:—

She had begun to menstruate at the age of 14, and had been regular till the spring of 1892—*i.e.*, for about two years—when her menses stopped, and she suffered from severe pain in her right side and difficulty of micturition. The doctor who attended her then told her that she had an "abscess," and ordered poultices over the lower part of the abdomen. Shortly afterwards there was a copious vaginal discharge, and her doctor examined her *per vaginam* and told her that her womb was "out of place." At this time she was confined to bed for six months. After that her periods returned, and the pain in her side ceased to trouble her.

This state of well-being lasted till September, 1898 (about six years), when she began to suffer from weakness and sickness, with a return of pain in the right side, especially severe at periods; and, on another doctor being called in, he found a small, hardish, fixed lump in the left groin, the size of half a walnut. With rest in bed the lump, which was tender, became less so, and the patient could walk about. On attempting to examine *per vaginam*, he could only enter the tip of his forefinger. A surgeon saw her, and advised operation, which was performed in November, 1898. The surgeon reported to her doctor that the lump was

<sup>1</sup> Specimens shown and paper read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 28th March, 1900.

a tubercular gland, which he had removed. After the operation patient states she was kept in bed for six weeks, during which time the wound healed, but that it broke down the second day she was out of bed. She was put back to bed for other five weeks, but the wound did not heal, and she went home, sixteen weeks before I saw her on 27th April. Since she had returned home she had been confined to bed constantly, and had suffered from occasional attacks of pain above and to the inside of Poupart's ligament, and which passed down to the left labium. Her menstruation had also returned, and at each period there was a discharge of blood from the sinus, at which times the pain and tenderness were greater.

On examination under chloroform, there was a sinus in the left groin over the region of the internal abdominal ring, through which a probe passed downwards and inwards to a distance of about 3 inches. *Per vaginam*, the cervix pointed markedly to the right, and there was hardness and thickening of the left broad ligament. Bimanually, the fundus uteri was fixed in the left side and in front, and could not be clearly defined, as it was blended in the hardened tissues through which the sinus passed.

The opinion I formed of the case was that, whatever had been the original condition, the left Fallopian tube now opened into the superficial portion of the sinus and so prevented it healing, and I advised operation for its removal.

After some little delay, the patient consented to further operation, and she was removed to one of the nursing homes in town, where I operated on the 1st June, 1899.

The abdomen was opened by an incision 3 inches long, parallel with, and half an inch above, Poupart's ligament. A probe was then passed into the sinus, and the finger in the abdominal cavity felt that this passed down to the left side of the fundus uteri, which was very much drawn up to the left side, where its left cornu blended with the mass of adhesions through which the probe passed. To this mass the omentum was firmly adherent, but was separated partly with the fingers and partly ligatured and cut. The sigmoid flexure was so firmly adherent that, in separating it, it was wounded, and had to be sutured. An incision was next made downwards, at right angles to the first one, on the inside of the sinus, and another was made on the outside, and these were joined so as to allow a square to be removed. This square included the mass of adhesions which passed down from the anterior abdominal wall to the left cornu of uterus, and it was dissected out. It was firmly adherent to the pelvic wall. When the

separation was complete, a ligature was passed round the part to be removed, a quarter of an inch from the uterus, and it was cut away. The ovary and tubes on the right side were examined and found to be normal, but no ovary could be discovered on the left side.

The abdomen was closed in layers, except that a gauze drain was inserted down to where the sigmoid flexure had been sutured.

On removal, the specimen measured  $3\frac{1}{2}$  inches in length, and was seen to consist of Fallopian tube surrounded by old inflammatory tissue.

The patient was very sick after the operation, but otherwise well. The gauze drain was removed on the second day, and the parts allowed to come together. There was a little discharge always from the opening, and on the 10th, 11th, and 12th June it had a distinctly faecal odour, and suggested some leakage from the wound of the sigmoid flexure. At this time I went off on holiday, and Mr. Edington kindly took charge of the case for me. When I returned on 16th July, I learned from his notes that by 1st July the cicatrix had healed, but that two days later its lower part was thinned and bulging. He opened it and evacuated a little pus. On 7th July there was blood discharging from the opening he had made, and it was noted that the patient was menstruating. The discharge of blood lasted as long as the menstruation—i.e., till 10th July. On my return I found two sinuses which joined a little under the skin, and passed downwards behind the pubes: these were lined with bluish unhealthy granulations, which, under chloroform, I scraped away, swabbed the sinuses with pure carbolic acid, and packed with iodoform gauze. After this the recovery was uninterrupted, and she went home on 1st August.

I saw her at the beginning of this month (March, 1900), and, in her own words, she "feels quite well, and has no pain whatever." Her menstruation is normal.

My first impression of this case was that it was one of tuberculosis of the Fallopian tube, and Dr. Galt, the pathologist to the Samaritan Hospital, examined part of the specimen microscopically, but was absolutely unable to find any appearances of tubercles, and reported that it consisted entirely of Fallopian tube embedded in cicatricial tissue. As the doctor who attended her in 1892 is dead, it is impossible to say what the illness then was; and it was that history, together with the statement that a tubercular gland had been removed

from the groin, that led me to think of tuberculosis. I may state that she has no signs of tuberculosis whatever.

It will be remembered that at the operation I was unable to find the ovary corresponding to the tube I removed, but the cicatricial tissue all around the tube was so dense that this possibly might escape identification. Another explanation of the condition is that it was originally a case of hernia of the ovary, and that the surgeon removed the ovary in mistake for a tubercular gland, leaving the Fallopian tube in the wound. When she got up, and menstruation came on, the thin partition external to the tube broke down, and a sinus leading to the mucous canal of the tube, being once established, persisted. It was noted by her doctor that, except at her menstrual periods, there was practically no discharge from the sinus. The sinuses that formed after my operation were probably due to bacterium coli infection from the wounded bowel, and would not have healed up so quickly had they been tubercular.

As regards the menstrual blood coming from the Fallopian tube, as far back as the days when the clamp was used in the treatment of the pedicle, in cases of ovariectomy it was noticed frequently that menstruation occurred from the stump of the Fallopian tube. When we consider that the tubes are simply prolongations of the uterine cornua, it would be wonderful if this was not so, and if their mucous membrane did not participate in the menstrual flux.

CASE II.—Mrs. R., æt. 27, began to menstruate at 13, married at 16; four children, last four years ago; all born natural; no abortion.

Menstruation was regular every four weeks till her last pregnancy. Since the birth of her last child it has been irregular and too frequent. The amount, as a rule, is scanty, but for the last three times it has been profuse, with clots. No dysmenorrhœa. Leucorrhœa moderate in amount, and cream-coloured.

Patient states that she has never been well since the birth of last child; she made a good recovery, and got up on the fifth day, but had to return again to bed in a week on account of pain in the left side and back. This pain still continues, and she has been an invalid and unable to attend to her household duties for the last four years. The pain is situated in the left iliac region and back, and sometimes shoots down the legs. The bowels are constipated.

*Per vaginam* (patient under chloroform), cervix is split on



both sides, and looks forwards. On bimanual examination a semi-fluctuant mass is found on the right side of Douglas' pouch. The uterus is felt to be above and adherent to this mass, and both are firmly fixed in the hollow of the sacrum, and to the right. On the left side the Fallopian tube is felt to be normal in position, but thickened, and its ovary is enlarged. I operated on 12th July, 1897.

Douglas' pouch was opened, after the uterus had been curetted, and the mass felt previously was found to consist of right ovary and dilated Fallopian tube: these were amalgamated together, and adherent to the fundus of the retroverted uterus and to the rectum behind. The adhesions were very firm, and some difficulty was experienced in separating them. When this was done, a ligature was passed round the pedicle, and the ovary and tube cut away. The uterus was then separated from the rectum, and assumed its normal position. The left tube and ovary were then examined, and as the tube was found to be not only enlarged and occluded, but its outer third amalgamated with the ovary, which was cystic, they were removed also. Douglas' pouch was then closed with sutures, except a small part in the middle, through which a drain of iodoform gauze was inserted, and the vagina was packed with iodoform gauze.

On examining the specimens removed, the right ovary in its outer third contains a cyst the size of a pigeon's egg. The left ovary has two smaller cysts in its outer third. Both tubes are occluded at the uterine ends, and the fimbriæ are amalgamated with the corresponding ovary and cannot be made out. Both contain pus.

The patient made an uninterrupted recovery, and went home on the 29th July.

I saw her on the 28th August, and she stated that the pain was gone and that she was gaining flesh, and also informed me that she had menstruated normally the week before. I asked her doctor (Dr. McGregor, Ayr) to keep her under observation, and this he has done up to the present time; and every month since then—*i.e.*, since August, 1897—she has menstruated regularly. She also states that her sexual appetite is in no way impaired.

Pozzi, in his treatise on gynecology, states that, although many cases of menstruation after double ovariectomy are reported, if carefully enquired into, it is found that menstruation invariably ceases after a few months; and that, if the ovariectomy has been complete—*i.e.*, no ovarian tissue left in

the pedicle—that this is due to “persistence of habit” or some diseased condition of the mucous membrane or substance of the uterus. In the case I have reported, however, the flow has occurred regularly, not for a few months, but for years; and the specimens which I have shown you prove that not only the whole ovaries, but also the greater part of the Fallopian tubes, have been removed, which goes against Tait’s theory that these organs have the paramount influence upon this function.

Halliday Croom, in Allbutt and Playfair’s *System of Gynæcology*, after quoting Lusk that in the great majority of cases of ovariectomy menstruation ceases, if not at once, at least within a year, states that his experience does not coincide with Lusk’s, but that a much larger proportion of women, after the ovaries have been removed, continue to menstruate regularly for years, and that the only difference in these patients is that the menopause is antedated by some years.

The number of theories that have been advanced as to the causation of menstruation are alone sufficient to display to us our ignorance of it. The oldest was founded on woman’s supposed uncleanliness—that menstruation was an effort on the part of nature to rid the woman of noxious humours. Then it was observed that the flow happened usually every four weeks, or every lunar month, and it was supposed to be under the influence of the moon. The theory that it was dependent on ovulation and the ovaries held till ovariectomy showed that women often menstruated even after these were removed. Then came Lawson Tait’s theory that the Fallopian tubes controlled this function, but it too had to be abandoned. The most recent theory is that it is neither the ovaries nor the tubes that cause menstruation, but the tubo-uterine plexus of sympathetic nerves. This theory has the advantage that it is almost impossible to controvert it, as no operator can say when he has destroyed the integrity of this plexus. On the other hand, it must be admitted that it is a feasible theory that this function is under the control of the sympathetic plexuses of the uterus and tubes.

As regards this patient’s sexual appetite, it does not seem to be of that pathological order to which Dr. Granville Bantock referred at the last meeting of the British Medical Association as occurring in some cases after the removal of the appendages, but rather it has returned to its former condition before her illness.

MELANOTIC SARCOMA OF THE CHOROID.<sup>1</sup>

By JOHN ROWAN, M.B., C.M.

MISS A. B., æt. 69, was sent to me on 12th May, 1898, by Dr. J. Cockburn Syson, to whom I am indebted for the notes which complete this case.

When I saw her she stated the left eye had been blind for three years. There was complete cataract, also a large ulcer with hypopyon. There was no fundus reflex, and, of course, ophthalmoscopic examination was impossible. The pain was so intense that even an examination of the external condition was difficult. The tension was raised, and, on questioning, it was elicited that she had seen coloured rings round lights, &c.; in short, the eye was glaucomatous. There were several large blood-vessels on the iris. There was also a history of gradual loss of sight, till only a small amount remained in one corner of the field of vision. This also was ultimately lost.

I enucleated this eye on 16th May, 1898. The wound healed well, and the socket remained healthy to the end.

The right eye was weak and watery, tension full, with commencing cataract. On ophthalmoscopic examination, the optic disc was seen to be pale, with some doubtful shelving. Veins somewhat full, one vein passing downwards being slightly twisted, and seemed to run forward, thus raising the question of a detachment of the retina. The patient complained of a black cloud in front of this eye.

I examined this eye for the last time in November, 1898. There were still some symptoms pointing to at least a glaucomatous tendency. In spite of this, after the left was enucleated, it got gradually stronger, the black cloud complained of got less, and, with suitable glasses, she was able to read J. 4. Ophthalmoscopic condition much the same as at previous note. The vein mentioned above being still enlarged, especially in its tributaries, there was still the same appearance of coursing forwards, but otherwise no sign of detachment of the retina could be observed, and thus the question of a new growth was again raised.

The last time I saw her it was impossible to decide whether there was a new growth here or not.

Examination of the eye removed showed it to be the seat of a large melanotic sarcoma of the choroid.

<sup>1</sup> Read at a meeting of the Glasgow Pathological and Clinical Society held on 9th April, 1900.

The accompanying illustration gives a better idea of the general condition than any long description would.

The large, deeply pigmented mass is seen growing from behind forwards, and occupying nearly two-thirds of the eyeball. The retina is seen on its anterior surface, and a point of peculiar interest is the small black spot of tumour growth starting back along the optic nerve.

On microscopic examination, the tumour was seen to be a melanotic sarcoma of the choroid, chiefly round-celled. There was considerable infiltration of the retina.

I did not see the patient after November, 1898, but cannot do better than quote the note Dr. Syson sent me:—

“About four months previous to her death, *i.e.*, early in July, 1899, she began to complain of digestive disturbance



—pain, eructations, &c. These symptoms did not yield satisfactorily to treatment, and, by the end of August, there was increased pain, vomiting, loss of flesh, slight jaundice, marked weakness, &c.; in short, all the symptoms of malignant mischief.

“At this time there was marked tenderness and thickening over the pyloric orifice, and these gradually extended to the liver.

“During the last month of her life she vomited almost constantly, and lost flesh rapidly, whilst the growth in the liver reached considerable dimensions. As a result of this, there was considerable swelling, dulness, and marked jaundice.

“She died from exhaustion on 28th October, 1899. There was no *post-mortem*.”

## CURRENT TOPICS.

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**THE CHAIR OF MEDICINE IN THE UNIVERSITY OF GLASGOW.**—The Queen has been pleased, on the recommendation of the Secretary of State for Scotland, to appoint Professor M'Call Anderson to the chair of Practice of Medicine, vacant by the resignation of Sir William T. Gairdner. The appointment of Dr. M'Call Anderson is a fitting recognition of his quarter of a century's service as Professor of Clinical Medicine and his great success as a teacher. We cordially congratulate him upon his appointment.

**GLASGOW UNIVERSITY: GRADUATION IN MEDICINE.**—The summer graduation ceremony took place in the Bute Hall on Thursday, 19th July, the Very Rev. Principal Story presiding. The graduands, among whom were seven ladies, were presented by Professor M'Call Anderson, Dean of the Medical Faculty. All were in attendance except Dr. W. C. Allan, who is in South Africa. After the ceremony, Professor Robert Muir delivered the usual address to the graduates. The following is the list of those who obtained degrees:—

### DOCTORS OF MEDICINE (M.D.)

I. *With Honours.*—James Fairlie Gemmill, M.A., M.B., C.M., Scotland (*Thesis*, "A Teratological Study").

II. *With Commendation.*—James Adam, M.A., M.B., C.M., Scotland (*Thesis*, "Remarks on the Nature and Treatment of Asthma"); William Carrick Allan, M.B., C.M., Scotland (*Thesis*, "Extra-Uterine Pregnancy"); John Laird Yuill, M.B., C.M., Scotland (*Thesis*, "On the Mental Deterioration in Epilepsy and Hemiplegia").

III. *Ordinary Degree.*—Robert Buttercase, M.B., C.M., Scotland (*Thesis*, "Appendicitis, with Cases").

### BACHELORS OF MEDICINE AND MASTERS IN SURGERY (M.B., C.M.)

John Lunn.  
Alexander M'Donald Nevin.  
John James Robertson.

James Wallace Shane.  
Archibald Stevenson.

### BACHELORS OF MEDICINE AND BACHELORS OF SURGERY (M.B., CH.B.)

#### I. *Honours.*

Charles Campbell Cuthbert, M.A.<sup>1</sup>

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<sup>1</sup> Mr. Cuthbert gains the Brunton Memorial Prize of Ten Pounds, awarded to the most distinguished Graduate in Medicine of the year.

## II. Commendation.

Anderson Gray M'Kendrick.  
Leonard Findlay.  
Alexander Wilson.  
Edgar William Sharp.

Alfred Robert Maclurkin.  
James Freeborn Bennett.  
Andrew Mair.  
William Barr Inglis Pollock.

## III. Ordinary Degrees.

Matthew Aikman, M.A.  
George Arthur.  
Gavin Barbour.  
Thomas Thomson Bathgate.  
Alexander Binning.  
Alexander Birch.  
Harry Egerton Brown.  
John Douglas Brownlie.  
Thomas Carruthers, M.A.  
Alexander Henderson Cassells.  
Edward Provan Cathcart.  
Daisy Annabella Murdoch Clark, B.Sc.  
John Thomson Clark.  
Robert Clark.  
Archibald Wm. Wallace Davidson.  
Frank Lindsay Dickson.  
David Curr Douglas.  
John Pinkerton Duncan, B.Sc.  
Alexander Fraser, M.A.  
Lizzie Thomson Fraser.  
Gilbert Garrey.  
William Gibson.  
Edward Gillespie.  
William Girvan.  
Helen Mary Gordon.  
Charles Aikman Gourlay, M.A.  
John Gracie.  
Charles Herbert Gunson.  
Archibald Wilson Harrington.  
Isaac Mackay Huey.  
Thomas Inglis.  
Pierce Jones.  
William Bryce Kerr.  
James Dickson Laidlaw.  
John Francis Lambie.

Norman Maclean Leys.  
Mary Forbes Liston.  
John Lockhart.  
Alexander Logan.  
David Longwill.  
James Mackinnon.  
George Todd Maclean, M.A.  
Burgess M'Phee.  
Robert MacNab Marshall.  
Allan Martin, M.A., B.Sc.  
James Millar, M.A.  
Ernest Wardlaw Milne.  
Alexander Robert Moir.  
Alexander Munro.  
Robert Rennie.  
John Duncan Richmond.  
Margaret Mitchell Ritchie.  
David Russell.  
James Scott, M.A.  
James Shearer.  
David Ap Simon.  
Christian Cleland Wood Smith.  
James Johnston Smith.  
John Steele Smith.  
Andrew Stewart.  
Gertrude Florence Fleetwood Taylor.  
Robert Taylor.  
Thomas Bird Tierney.  
James Cameron Turnbull.  
William Dinning Walker.  
George White.  
Morgan Watkin Williams.  
Thomas Watson Wilson.  
Hugh Patrick Wright.

The following candidates attained distinction in the subjects indicated:—(S, Surgery and Clinical Surgery; P, Practice of Medicine and Clinical Medicine; M, Midwifery.):—

James F. Bennett (M).  
Edward P. Cathcart (M).  
John T. Clark (M).  
Charles C. Cuthbert, M.A. (P).  
Archibald W. W. Davidson (M).  
John P. Duncan, B.Sc. (P).  
Leonard Findlay (S, P).  
Charles A. Gourlay, M.A. (M).  
Lila S. Greig (M).  
Archibald W. Harrington (M).  
James M. Henry (M).  
Alexander King (M).

James D. Laidlaw (S).  
Norman M. Leys (M).  
James D. Lickley (M).  
Anderson G. M'Kendrick (M).  
James Mackinnon (M).  
Alfred R. Maclurkin (M).  
Burgess M'Phee (M).  
Robert M. Marshall (M).  
Allan Martin, M.A., B.Sc. (M).  
James C. Turnbull (P).  
Alexander Wilson (S, M).  
Hugh P. Wright (M).

FOR the following contribution we are indebted to the courtesy of Mr. W. Innes Addison, who recently came across it in an accidental manner, and transcribed it literally. Evidently several of the personifications have been suggested by those in Milton's *L'Allegro* :—

[*Glasgow Courier*, Thursday, 20th March, 1794.]

"The following Lines on the Royal Infirmary lately erected in this city, will not, we believe, be unacceptable to our learned Readers :

"IN NOSOCOMIUM GLASGUENSE.

"Huc ades, O dilecta Salus, gratissima Divum,  
Cui niveus color est, ingenuusque rubor.  
Te Jocus, auratis, te Spes circumvolat, alis :  
Te facilis Risus, te comitatur Amor.  
Te fugiunt Luctus et Pallor tristis et Angor :  
Morborum fugiunt te furiosa cohors.  
Ecce, domus nitidis, nitidæ tibi, fulta columnis !  
Ecce tibi manibus condita templa piis !  
To colit, et talem tibi Glasgva sancit honorem :  
Fac sit in æternum, sit tibi Sacra domus.  
Te gemitus inopum, te tristia vota fatigant :  
Pauperis, O semper, sit tibi cura precor !

"ACAD. GLASG. STUDIOsus.

"A good Translation will be acceptable."

[*Glasgow Courier*, Thursday, 27th March, 1794.]

"We have received a number of Translations of the Latin Verses on the Royal Infirmary, inserted in the *Courier* on the 20th current, of which we shall occasionally give a few specimens.<sup>1</sup>

"IMPROMPTU.

"*Translation of the Lines of Studiosus on the Royal Infirmary.*

"Come, buxom Health ! and with thee bring  
The varied tints of youthful Spring,  
The Lilly's white, the red that glows  
Fresh on the bosom of the Rose.

"Thee Mirth attends, and, light as air,  
Hope, undisturb'd by rankling Care ;  
And Laughter, uncontroul'd by Art ;  
And Love, the solace of the heart.

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<sup>1</sup> None appeared except this one.—W. I. A.

"Far from thy chearful presence fly  
Paleness, and Grief, with haggard eye,  
Black Melancholy, racking Pain,  
And dire Disease—a frantic train.

"Behold, uprear'd by pious hands,  
A House on shining columns stands;  
Allur'd by Med'cine's skilful care,  
Thither—O gentle Nymph—repair.

"Glasgow, to celebrate thy Fame,  
Inscribes this Temple with thy name;  
Long may the splendid Mansion be  
Sacred, O lovely Health! to thee.

"Here, when the Poor, with ceaseless care,  
Beset thy shrine with vows and prayer,  
Still may thy choicest gifts attend  
Th' industrious poor, and poor man's friend.

"KILBARCHAN.

"*March 24th.*"

**WESTERN INFIRMARY.**—Sir William T. Gairdner has been appointed an Honorary Consulting Physician on his retirement from the visiting staff.

**KELENE** is the registered trade name of an absolutely pure ethyl chloride prepared for use as a local or general anæsthetic. This drug undergoes spontaneous evaporation so rapidly as to generate intense cold, and the anæsthetic power which it possesses in virtue of this property has been recognised for some time past. To allow of its being easily stored and used, M. Monnet devised a holder which combines the advantages of a hermetically sealed receptacle with those of a syringe. The chloride boils at 10° C., and when a charged Monnet's tube is held in the hand, the liquid is forced through the capillary outlet in a fine spray, which can be directed upon the part to be anæsthetised.

In 1895 Kelene began to be used as a general anæsthetic; apparently at first in an accidental way. In certain cases where it had been intended to induce merely local anæsthesia for tooth extraction, narcosis supervened, and thus the more general applicability of the drug was discovered. It may, accordingly, be administered in place of nitrous oxide, and published experiences seem to show that it is perfectly safe.

For further details we refer our readers to the advertisement pages.



## MEETINGS OF SOCIETIES.

## GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1899-1900.

MEETING VI.—15TH DECEMBER, 1899.

*The Vice-President, DR. JOHN BARLOW, in the Chair.*

## I.—CASE OF APPENDICITIS WITH ABSCESS IN THE RIGHT ILIAC FOSSA, AND GENERAL PERITONITIS: LAPAROTOMY: RECOVERY.

BY DR. ROBERT KENNEDY.

Dr. Kennedy showed a boy, aged 11 years, who was admitted to Ward XIII in the Western Infirmary on 16th August, 1899, on account of intestinal obstruction, and of whom the following history was obtained:—

Fourteen days before his admission he was swinging, and was said to have "racked" himself. On the following day he commenced to vomit, but did not complain of any pain. Three days later he complained of acute pain situated in the right iliac region, and passing down the right leg. Fomentations were applied, with some relief, and on the following day a very good motion was passed as the result of administration of castor oil. On the following day the bowels were again slightly moved. On 8th August he passed flatus freely, and thereby obtained much relief, but the vomiting continued. No flatus was passed after 13th August, and on the 14th an enema failed to cause the bowels to act. On the day before his admission he was screaming with pain, and the abdomen was much distended.

The patient previous to this illness had always been healthy.

When first seen after his admission to hospital the patient was much emaciated, his face was pale and anxious, his teeth and lips were covered with sordes, and his tongue was dry and brown. He lay on his back with his knees drawn up, the abdomen was greatly distended, marks of coils of distended intestine were visible on the surface, and the umbilicus was protuberant. Palpation revealed extreme tenderness over the entire surface, and not specially marked at McBurney's point. No fluctuation could be made out over the right iliac fossa. Percussion, except over an area in the right flank, gave every-

where a tympanitic note. Examination of the rectum and of the hernia regions revealed nothing wrong. Vomiting was frequent; temperature was  $97.6^{\circ}$  F.; pulse 84, but weak; and respirations, which were entirely thoracic, 24.

Being in charge of the ward in Professor Buchanan's absence on holiday, Dr. Kennedy was sent for immediately on his admission, and, on examination, decided to open the abdomen without delay. This was done by an incision in the middle line, through which the distended coils of intestine immediately forced themselves. It was then observed that the entire peritoneum was red and inflamed, and that the coils of intestine were adhering to one another at many points. These adhesions were easily broken down in search for the cause of obstruction, but left raw and bleeding surfaces. No cause of obstruction was met in the small intestine, which was everywhere greatly distended, and on nearing the ileo-cæcal valve an adhesion between the parietal and visceral peritoneum was met. This adhesion was so slight that it gave way before the finger without any force being used, and about a pint of thick, foetid pus welled up into the abdomen. This was wiped away as it welled up. An oblique incision was then made in the right iliac region, and the abscess cavity washed out, the fluid entering by the median incision, in order to wash out that side of the abdomen which had been contaminated with the pus, and escaping by the lateral incision. An examination of the region of the appendix was then made, and although the history pointed to the condition being a recent one, and although there was no history of previous attacks, there must have been mischief of longer duration, as the cæcum and neighbourhood were matted with dense and firm adhesions. No aperture could be detected, and, as the patient's condition was collapsing, it was not deemed advisable to proceed to remove the appendix at this operation, as this must have proved tedious in presence of adhesions so firm. The ascending colon was not distended, but contained a small quantity of scybalous masses.

As already stated, only the right side of the abdomen was washed out. The coils of intestine were then replaced with some difficulty, and the incisions closed, drainage being employed at the lower angle of the median incision, and through the lateral incision also.

During the night the patient slept but little, and remained in a more or less collapsed condition; but on the following day the temperature commenced to rise to normal, and flatus was freely passed, and his condition was much improved.

Flatus continued to be freely passed, and on the fifth day two copious motions were passed without medicine or enemata. After this the bowels moved daily, and the patient's condition continued to improve.

On the seventh day he presented signs of commencing parotitis on the right side. This ultimately formed an abscess, which was incised on the fourteenth day, after which it quickly healed.

On the tenth day the drainage-tubes were removed from the abdomen, and the sinuses left speedily closed up.

The patient was allowed out of bed at the end of six weeks, and three weeks later, being in very good health, and having increased considerably in weight, was dismissed from hospital.

The patient is now in good health, and the abdominal cicatrices are efficient.

## II.—CASE OF APPENDICITIS: REMOVAL OF UNUSUALLY SMALL APPENDIX DISTENDED WITH A HARDENED MASS OF FÆCES.

By DR. ROBERT KENNEDY.

Dr. Kennedy showed a man, aged 28, who was admitted to Dr. Patterson's wards in the Western Infirmary on 22nd February, 1899.

Two years before his admission he was confined to bed with acute pain in the right iliac fossa, and frequent vomiting. Since then he had several attacks of the same kind, the illnesses lasting from one to three weeks.

On admission to the Western Infirmary he was suffering from an attack. There was considerable tenderness over the abdomen, which was most marked at M'Burney's point. The abdomen was tympanitic, except over the right iliac fossa, where percussion gave a dull note. Maximum temperature was 100° F. He improved under treatment, and was dismissed well on 4th March.

He was readmitted on 15th March, as three days previously he had a recurrence of all his symptoms, viz., pain and tenderness in the right illiac fossa, vomiting, intestinal obstruction, and elevation of temperature.

Inspection showed a fulness in the right iliac fossa, and a hard mass, dull to percussion, could be felt internal to the anterior superior spine—of elongated shape, about 1½ inch in breadth, and extending from the middle of Poupart's ligament to 1 inch above the anterior superior spine. This swelling was very tender.

On 21st March Dr. Kennedy made an incision over the

swelling in the right iliac fossa. On reaching the peritoneum, it was found greatly thickened, and firmly adherent to the cæcum. With some difficulty it was separated, and the cæcum exposed. This was found to be bound down on all sides by firm organised adhesions, which were separated with much difficulty, the general peritoneal cavity being opened in course of the separation. On separating the adhesions at the lower limit of the cæcum, and turning it forward, the appendix was found also firmly adherent. It was very short, and its length was equal to its breadth, the structure appearing as a spheroidal body, about the size of a hazel-nut, attached to the cæcum. It was tensely distended, and on applying the ligature, previous to its removal, it ruptured on its posterior aspect, and a hardened concretion escaped. It was ligatured close to the cæcum, and removed. The abdominal wound was closed in layers.

The patient recovered from the operation well, and on the third day the bowels were moved, and from this time onward his progress was rapid.

It is now nine months since the operation, and the patient has had no recurrences of his trouble, his health has been completely restored, and he has gained 4 stones in weight.

The appendix, which was removed, was found to be very thin-walled on its posterior aspect, where it ruptured during removal, and being so tensely distended with its contents, doubtless rupture would have occurred very soon had no operation been done.

The concretion which escaped proved, on examination, to be hardened fæces.

Further, had operation in this case been longer delayed, and had rupture occurred, the abscess which would have formed would most probably not have remained limited or presented on the anterior abdominal wall, for the adhesions were particularly firm in front and weak towards the peritoneal cavity. A speedy infection of the general peritoneal cavity would, therefore, have been the result of rupture of this appendix.

*Dr. Rutherford* cited a case under his own care at the Royal Infirmary two years ago, where general purulent peritonitis was present, and where, after removal of the sloughing appendix, a counter opening was made in the middle line, and the abdomen washed out, with success. He was of opinion that the prognosis in such cases was better than in those in which, by a more insidious process, the infection of the peritoneum produced merely an exudation of fibrin and

agglutination of the intestines. In the latter form of peritonitis, apart from the fact that it was impracticable to irrigate the infected surfaces, there seemed also to be more complete intestinal paralysis, and with it an intoxication, probably in part from the intestine, but probably also primary, and due to the failure of peritoneal reaction (*cf.* Treves on *Peritonitis*).

He took occasion to refer to the account of the illness of Allan Burns given in the second edition of his book on the *Surgical Anatomy of the Head and Neck*. He died in 1811, at the age of 30, and is said to have died of cholera morbus. An abscess had burst into the rectum, and (*post-mortem*) it was found to surround the caput cæcum. The diagnosis was of interest as showing the elasticity of the term at that date—quite a generation after Hunter—and the obscurity in which abdominal diseases were involved.

### III.—CASE OF EXCISION OF THE ENTIRE LOWER LIP, WITH RESTORATION OF THE LIP BY TRENDELENBURG'S METHOD.

BY DR. ROBERT KENNEDY.

Dr. Kennedy showed a man, aged 78, from whom, seventeen months ago, he excised the entire lower lip on account of an extensive epithelioma, and formed a new lip by Trendelenburg's method. The new lip had undergone no retraction, had a satisfactory appearance, and fulfilled its functions perfectly.

### IV.—CASE OF GUMMA OF THE MAMMA.

BY DR. ROBERT KENNEDY.

Gummata of the mamma are of rare occurrence. In many of the larger text-books they are dismissed in a line or two as a possibility. Hutchinson does not note them in his book on syphilis, but Lancereaux gives several instances of them. In one of his cases the tumour was very hard, and situated close to the nipple, and he states that "anyone who had not observed the commencement of this affection, and did not know the antecedents of the patient, would have been unable to distinguish this tumour from that known under the name of scirrhus of the lactiferous ducts." In the following case, at one period, the tumour closely resembled a scirrhus of the mamma:—

Mrs. G., aged 30, sought advice at the Western Infirmary Dispensary, in March, 1898, on account of a sore on the right leg. The patient was emaciated and of a pale and earthy

colour. She stated that previous to her marriage in April, 1896, she had enjoyed good health, and had suffered from no disease. Her troubles commenced after the birth of her only child in December, 1896, after which her health began to fail. She states that shortly after the birth of her child she suffered from a discharge from the vagina, and that shortly afterwards she suffered from a sore throat; that about the same time she had a cutaneous eruption over the body and anterior surfaces of arms and legs. This eruption, she states, resembled the rash of measles, and remained about fourteen days. Her hair, also, about this time fell out very rapidly.

About six weeks previous to her first visit to the hospital the ulcer on the right leg commenced, and when first seen was about an inch in diameter, circular, with sloughy base and undermined edges, and situated about the middle of the leg and on its outer side. There was also present another ulcer, about the size of a crown piece, situated in front of the right thigh, about its middle. This commenced a week or two later, but presented similar characters to that on the leg. There was also a swelling situated on the antero-external aspect of the left thigh, in the substance of the vastus externus, about an inch above the patella. This swelling was about the size of a damson, of doughy consistence, and tender on being firmly pressed. The three lesions mentioned were the only morbid conditions which could be discovered. The patient was treated with iodide of potash, and both ulcers soon commenced to heal, while the doughy swelling in the vastus externus disappeared entirely in several weeks.

The patient continued the medicine regularly, but despite this, in July, 1898, four months after commencing treatment, two ulcers appeared on the left arm, one on each side, in both instances starting as small swellings in the subcutaneous tissue. These, however, after increasing to the size respectively of a sixpence and a shilling, commenced to heal. The treatment was continued, and the ulcers situated on the leg and thigh both healed completely during the winter of 1898.

Although she never ceased taking the medicine regularly, she developed, in April, 1899, two further lesions, this time situated on the right fore-arm. Both commenced as subcutaneous swellings, both on the anterior aspect, one about 2 inches above the wrist, and one at the junction of the upper and middle thirds. The lower swelling softened, broke, and discharged, and commenced to ulcerate, while the upper remained hard and attained the size of a hazel-nut; but the skin at no time became involved.

In June, 1899, she returned with two additional swellings, one situated near the left breast, and one situated in the substance of the right mamma. They had only recently been detected. On examination, there was a tumour about the size of a pigeon's egg situated in the substance of the pectoralis major at its lower border, midway between the breast and the left axilla. The tumour was distinctly in the muscular substance. It was of hard consistence, and painful only when firmly pressed.

The swelling in the right breast was situated in the substance of the gland, in its upper and inner quadrant. It was about the size of a walnut, and as hard as a scirrhus. It was freely movable on the underlying tissue, and the skin was not attached to it at any point. It was not tender except on firm pressure, and gave her no trouble except for the knowledge of its presence. No enlarged lymphatic glands could be felt.

The patient was then prescribed perchloride of mercury in addition to iodide of potash, and very soon after this treatment was commenced the character of the two last developed swellings changed, becoming both softer and smaller. In a few weeks the swelling in the pectoralis disappeared entirely, by September the ulcers on the left arm and that on the right fore-arm had quite cicatrised, while the swelling in the upper part of the right fore-arm was much smaller.

In November, 1899, the swelling in the right fore-arm still remained as a hard tumour about the size of a pea, situated subcutaneously, while the tumour in the right mamma was about the size of a damson, soft, freely movable, and scarcely at all tender, presenting characters similar to those of an adenoma.

The patient has had no miscarriages; her child, now about 3 years of age, presents no signs of syphilis, and has no history of syphilitic manifestation. Her husband suffered previous to marriage from "venereal trouble," which appears from the description to have been gonorrhœa. The history of the patient points undoubtedly to the date of her infection having been subsequent to the birth of her child.

#### V.—ON THORAX RESECTION FOR EMPYEMA AND THE RESULTING DEFORMITIES.

By DR. H. RUTHERFURD.

Dr. Rutherford's paper will be found as an original article in our issue for April, 1900, at p. 241.

VI.—NOTES ON CLINICAL SURGERY.

BY DR. JAS. H. NICOLL.

Dr. Nicoll's notes will be found as an original article in our issue for April, 1900, at p. 247.

VII.—PATIENT WHO WAS TREPHINED ON ACCOUNT OF APHASIA AND PARALYSIS OF THE RIGHT ARM, IN WHOM A LARGE HÆMORRHAGIC CYST OVER, OR ON, THE LEFT CEREBRAL HEMISPHERE WAS EVACUATED, AND WHO RECOVERED HIS SPEECH AND THE POWER OF HIS ARM AFTER THE OPERATION.

BY DR. J. LINDSAY STEVEN AND MR. JAMES LUKE.

Dr. Lindsay Steven and Mr. Luke's paper will appear as an original article in a future issue of the *Journal*.

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MEETING VII.—12TH JANUARY, 1900.

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*The President, MR. H. E. CLARK, in the Chair.*

I.—DERMOID OVARIAN CYST.

BY DR. E. A. GIBSON.

The specimens which I here show you were removed to-day by me, with the assistance of Dr. Edington, from a lady, æt. 31.

The history of the case was that, twelve years ago, she contracted gonorrhœa from her husband, and since then has been more or less an invalid, suffering from great lumbar and iliac pains, menorrhagia, and dysmenorrhœa.

On opening the abdomen, we found both Fallopian tubes dilated and adherent to their corresponding ovaries. This specimen is the right ovary and tube. The tube is seen to be dilated to the size of the little finger, and its fimbriæ are agglutinated together. The ovary shows a recently ruptured Graafian follicle. The patient menstruated only a week ago. The whole mass was firmly adherent to the posterior pelvic wall.

The other specimen is the left Fallopian tube. This tube with its ovary were so very adherent to the rectum, and



so embedded in adhesions that they had to be dissected out separately. The tube shows the same characteristics as its fellow. This ovary—the left—was about the size of a walnut, and the interesting point about it is that when it was removed and opened, it was found to be a dermoid. You will see that it is lined with thick fair hair.

## II.—CASE OF SUPERFICIAL EMPHYSEMA OCCURRING DURING LABOUR.

BY DR. J. BARR STEVENS.

Dr. Stevens' paper appears as an original article at p. 102.

*Dr. J. K. Kelly* said he had only had one case of emphysema occurring during labour. It was a primipara, and the labour was very severe. The emphysema involved one side of the face and neck; and he thought at the time that it was due to rupture of the larynx, though it might have been caused by rupture of the lung alveoli.

*Dr. Munro Kerr* referred to an analysis (by Klotz) of forty cases, from which it appeared that the condition was much more frequent in primiparæ, and was always associated with great difficulty in labour. Sometimes the emphysema was followed by dyspnœa. Of the forty cases, only one ended fatally, and in that case there was found to be marked emphysema of the lung alveoli.

*Dr. David Watson* said he had had a case where the emphysema involved the mucous membrane of the mouth, and he was of opinion that there must have been a rupture somewhere in the upper air-passages.

*Mr. Clark* said he always had a difficulty in explaining the infrequency of pneumothorax in such cases. In surgical emphysema from fracture of ribs, air did not enter the pleura to any extent, although it was the place where it apparently ought to go. He had seen two cases of emphysema resulting from an expulsive respiratory effort.

*Dr. Stevens* replied.

## III.—REMARKS ON POST-CLIMACTERIC HÆMORRHAGES, ILLUSTRATED BY A SERIES OF NINETEEN CASES

BY DR. JOHN EDGAR.

In temperate climes the climacteric generally occurs between the ages of 40 and 50. Occasionally it is sudden, but, as a rule, for one to three years it is irregular. There may be frequent hæmorrhages, but more often one or more menstrual

periods are missed at a time. The quantity also is apt to vary, the tendency being, after a period of amenorrhœa, for a profuse hæmorrhage to occur. It is rather unfortunate that such irregularities, which have given rise to the apt term, the "dodging period," for this time of a woman's menstrual life, are so frequent, because the woman herself, and in many instances also her medical attendant, are led to regard as menstrual, hæmorrhages really due to disease of the internal genital organs. Such hæmorrhages may coincide with the menopause, or they may be post-climacteric, and may then follow so closely upon the menopause as to very readily lead to error; but in other instances they do not begin till several years after the change of life, and are then regarded as menstrual only by very ignorant or very careless medical men. Unfortunately, however, women themselves too often make this mistake. For this reason I think every practitioner should look upon it as a duty to instruct their patients on such questions.

In both hospital and private practice, I make it a rule to recommend a bimanual examination in all cases of excessive uterine hæmorrhage during the menopause, and in all cases in which hæmorrhage, be it scanty or profuse, sets in after an interval of six months or more. Where the time which elapses between the menopause and the onset of uterine hæmorrhage amounts to a year or more, I think the medical man, once he is aware of the fact, who does not insist on an examination being made by himself or by a specialist is guilty of gross negligence. Such neglect is too common. It is one of the chief reasons why gynæcologists so seldom see malignant disease of the uterus at a stage early enough for radical operation.

To give an idea of the relative frequency of post-climacteric hæmorrhage to the other gynæcological complaints, I may say that out of 470 cases under my care at the Samaritan Hospital for Women during the last three years, 16 were of this kind. These include—9 cases of cancer of vaginal portion, 1 of cancer of cervix and body, 1 of adenoma malignum of body, 2 of cervical mucous polypus, 1 of fibroid, 1 of ovarian cyst, 1 of cystic ovary with chronic pelvic peritonitis. Out of a considerable number in my private practice, I may mention two of adenocarcinoma of the corpus uteri, and one of mucous polypus of the corpus uteri.

Of the nine cases of *cancer of the vaginal portion*, the ages varied from 47 to 73, viz., two at 47, and one at 49, 54, 55, 56, 59, 60, and 73 respectively. By way of parenthesis I should

like to remark that, with regard to the general question of age in relation to uterine cancer, I am inclined to think that teachers are apt to create a wrong impression in students' minds. They insist so strongly on the great frequency of this disease at the menopause, that the student, in many cases, goes into practice with the opinion that this is the only time that cancer is possible. You may think it incredible, but I have been on several occasions assured by medical men, whom I have met in consultation, that a certain case could not be one of cancer because the age of the patient was 35 or under. I have seen two cases in which the age was only 26.

In all the nine cases, with one exception—a case of medullary cancer—the vaginal portion was replaced by a more or less funnel-shaped excavation, with the usual hard nodular edge and the friable bleeding surface. In only two was the disease limited enough to justify the radical operation, and even these two were doubtful. One died a year afterwards from recurrence, but she had less pain and less discharge. The other is still alive, a year and a half subsequent to the operation. She is stouter, and has had neither bleeding nor pain, but the cancer has, unfortunately, recurred.

I cannot but think that Halliday Croom was much too gloomy in his views regarding the prognosis of the radical operation for cancer (*Edinburgh Obstetrical Transactions*, 1899, vol. xxiv). I think infection of the peritoneum, due to the method of operation which he adopted, viz., Doyen's, was possibly the cause of the recurrence and pain in his cases.

In order to determine whether or not the cancerous process has extended into the parametrium, I am accustomed to make a recto-abdominal examination under chloroform. This is the best method of palpation of the parametrium. When infected, this structure is peculiarly unyielding, and often nodular.

It is especially in cases of hæmorrhage due to cancer that early examination is important, because bleeding is generally the only symptom in the first stage. Pain, fœtid discharge, and cachexia are late features, and in most cases do not appear till the disease has advanced too far for operation. In some, unfortunately, hæmorrhage is absent. I have seen several such cases, none early enough for radical operation.

*Cancer of the cervix*—i.e., of the walls of the cervical canal—and *cancer of the corpus uteri* cannot be made out by the finger unless the os be sufficiently patent to allow it to enter. In such cases it is usually necessary to employ a curette, and submit the scrapings to microscopic examination; but, if the uterus be considerably enlarged, it is sometimes better to

dilate the cervical canal, and explore the uterine cavity with the finger. The following are cases in point:—

CASE I. *Carcinoma of cervix and body*.—Mrs. A., æt. 53, was admitted into the Samaritan Hospital on 7th January, 1899. Married twenty-six years; sterile; menopause three years before. Her complaint was bleeding of a year's duration (this she thought was a recurrence of the menstrual periods); also pain in the pelvic region, and foetid discharge for four months and loss of flesh for six months.

*Per vaginam examination*.—Cervix enlarged to about 3 inches in diameter; the lips of the os smooth; the os patent; papillomatous masses felt inside the cervix; parametrium infiltrated.

On 21st January the patient was anæsthetised, the os dilated, and the uterine cavity explored digitally. The cervix was found to be ballooned, and filled with papillomatous masses springing from its walls, which latter were 1 cm. in thickness. The internal os admitted one finger into the cavity of the corpus uteri, which was likewise found to be distended with papillomatous masses, though not to the same degree as the cervix. They were removed with the curette, the walls touched with Paquelin's cautery, and the cavity packed with iodoform gauze. The patient made a good recovery, but was not, of course, cured of her disease.

CASE II. *Adeno-carcinoma of corpus uteri*.—Miss U., æt. 54; menopause eight years ago. In July, 1898, she had uterine hæmorrhage for two weeks. This recurred at monthly intervals from November till January, from which time till the operation in November, 1899, it was almost constant. On examination, nothing abnormal was made out beyond slight enlargement of the uterus. On 2nd November I curetted the uterus, and removed a large quantity of papillomatous material, which on microscopic examination proved to be undoubted adeno-carcinoma. Three weeks later I got the patient into the Central Nursing Home, and performed hysterectomy by abdominal section, first freeing the cervix *per vaginam*, and stuffing both cervix and vagina with iodoform gauze (specimen and microscopic section shown). Owing to cardiac debility, however, the patient did not rally from the operation, and died in forty-eight hours.

CASE III. *Adeno-carcinoma and myoma of corpus uteri*.—Mrs. W., æt. 56, sterile, menopause at 46, complained of constant

uterine hæmorrhage from February, 1899. She had lost 8 lb. in weight. On examination, the uterus was felt to be slightly enlarged, and a myoma of the size of a damson was made out at the left cornu. In consultation with Dr. Gibson, I determined to perform hysterectomy by abdominal section. This I did on 7th September in the Training Home for Nurses (specimen shown). The patient made an uninterrupted recovery. She has since gained in weight, and feels well. There is so far no recurrence, and I fully expect the cure to prove permanent.

I have had only one other case of malignant disease of the uterine body. In this case I curetted, and two weeks subsequently performed hysterectomy. Microscopic examination showed that the disease was adenoma malignum.

As showing the importance of curettage before determining on the diagnosis of cancer of the body, I shall next describe a case in which a polypus of the size of a bean was removed with the curette from the neighbourhood of the right cornu.

CASE IV. *Case of mucous polypus of corpus uteri.*—Mrs. B., æt. 65, iii-para, menopause at 45, was seen by me in April, 1898. She was complaining of bearing-down and of uterine hæmorrhage of a few days' duration.

*Per vaginam examination.*—Uterus enlarged, but movable, and walls very little thickened; sound passed  $3\frac{1}{2}$  inches; endometrium rough.

I thought the case was probably one of malignant disease of the uterus, and recommended diagnostic curettage.

At the operation very little was removed in addition to the polypus already mentioned. This was examined microscopically by Dr. Teacher, and found to be a simple adenomatous structure: the glands were greatly dilated, and the epithelial lining of each was composed of a single layer of cells, columnar only in the very small glands, flattened in the others. There was very little interglandular connective tissue. Properly speaking, such tumours are simple adenomata, but the tendency nowadays is to restrict the term adenoma to malignant glandular new formations, and retain for the others the name of mucous polypi of the corpus uteri. (Microscopic section shown.)

The patient has got on well. I have examined her repeatedly since the operation. There has been no recurrence of the hæmorrhage, and the uterus is now of the size usual at the age of 67.

In the next two cases which I shall report the post-climacteric hæmorrhage was due to *cervical polypus*.

CASE I.—Mrs. M., æt. 48, menopause at 42, was admitted into the Samaritan Hospital in May, 1899, complaining of weakness and loss of flesh. She had had bleeding for one day a month previously.

On examination, a cervical polypus of the size of a grape was felt protruding through the os. It was twisted off, and the uterus curetted. The result was good. There has been no recurrence of bleeding.

CASE II.—Mrs. K., æt. 49, menopause seven months previously, was admitted into the Samaritan Hospital in July, 1899. Her complaint was profuse bleeding for ten days previous to admission. She had had also constant profuse leucorrhœa, and pain in the left iliac region of five years' duration. A small polypus attached to the anterior wall of the cervix was removed by torsion, and the uterus curetted. She had a good recovery, and has remained free from hæmorrhage.

In another case the hæmorrhage was due to a *fibroid uterus*, and was associated with frequency of micturition and pelvic pain. The patient was 53 years of age, and had had the menopause a few years previously. Operation was refused.

In the remaining two cases the hæmorrhage was apparently the result of a *cystic ovary*.

CASE I.—Mrs. A., æt. 51, v-para, was admitted into the Samaritan Hospital in July, 1897. Menstruation had been regular till the end of 1896. Seven months before admission bleeding had begun, and had continued thenceforward, with only a week's intermission now and then. She had also had a good deal of pelvic pain.

On examination, an ovarian cyst of the size of an eight months' gravid uterus was discovered.

On 10th July the uterus was curetted, but very little endometrium was removed. The sound passed  $2\frac{3}{4}$  inches. Twelve days later ovariectomy was performed. Both ovaries were removed, as both were found cystic; the smaller was of the size of a Tangerine orange.

The patient made a good recovery, and has remained well. There has been no recurrence of the bleeding.

CASE II.—Mrs. D., æt. 52, menopause several years previously, was admitted into the Samaritan Hospital on 14th February, 1898, complaining of pain in the left iliac region, and of blood-stained vaginal discharge of three months' duration.

On examination, the uterus was found to be retroflexed and adherent, but small, and the left ovary was cystic. She refused operation, and left the hospital in a few days.

In this paper I have gathered together examples of many of the causes of post-climacteric hæmorrhage. What I wish especially to urge is the importance, in all such cases, of an early bimanual examination, to be followed, if necessary, by diagnostic curettage.

#### IV.—DEMONSTRATION OF PATHOLOGICAL SPECIMENS FROM GYNÆCOLOGICAL CASES.

BY DR. J. K. KELLY.

Dr. Kelly exhibited a series of pathological specimens taken from cases in his wards in the Royal Infirmary.

### GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

SESSION 1899-1900.

MEETING VIII (*continued*).—14TH MAY, 1900.

*The President*, DR. THOMAS BARR, *in the Chair*.

#### III.—SPECIMEN OF MENSTRUAL DECIDUA.

BY DR. J. H. TEACHER.

Dr. Teacher showed a specimen of menstrual decidua which presents some unusual characters. The preparation has been placed in the Hunterian Museum. It was received about eight months ago from Dr. W. Moffat Holmes, of Gourrock, who gave the following history:—"The portion of membranous-looking matter was expelled from the vagina after four days' scanty and 'difficult' menstruation, and I naturally suspected abortion, but was assured that pregnancy was impossible.

The patient is married, and has three of a family, the youngest being about 7 or 8 years of age."

The specimen as received was a mass of light brown, fleshy membrane, which, on being disentangled and spread out in water, assumed the shape of the cavity of the body and cervix of the uterus. It measures 8.5 cm. in length; the triangular portion corresponding to the body of the uterus forms about half of that length, and measures 3.5 cm. in breadth at its widest part; the portion corresponding to the cervix is 6 to 8 mm. wide; and the thickness, greatest in the body part, varies from 1 to 5 mm.

It is therefore somewhat larger than normal uterine mucous membrane would be, but the patient is a multipara. The surface of the membrane on all sides is smooth, but somewhat wrinkled, and is dotted all over with little pits, which are the orifices of glands; in fact, it presents the appearance of uterine mucous membrane. The smooth external surface was puzzling, and the first impression was that it was only a fibrinous cast of the cavity of the uterus; but on cutting into it there was found to be a cavity, the walls of which were ragged and bloody, and three orifices corresponding to the Fallopian tubes and os uteri. It was clearly a decidua membrane, which had been turned completely inside out in process of detachment and expulsion.

In thickness the membrane varies at different points; at the borders of the triangle it is extremely thin and lace-like; it is nowhere more than 2 mm. in thickness, and is for the most part less than that.

As to its nature there was some difficulty. The diagnosis lay between—(1) menstrual decidua, *i.e.*, the layers of thickened uterine mucous membrane which are passed in membranous dysmenorrhœa; (2) an ordinary abortion; or (3) decidua connected with extra-uterine pregnancy.

The subsequent history of the case negatives the idea of extra-uterine pregnancy. Further, there was no reason to doubt the patient's statement that pregnancy was impossible. The complete absence of an ovum, or parts of an ovum, even of the smallest size, or of raw surface where an ovum might have lain, excluded the second condition. But the appearance and the microscopic structure of the specimen sufficiently favoured the third to suggest, at the time, the advisability of carefully watching the progress of the case. Unfortunately, the history is incomplete, no information as to the occurrence of dysmenorrhœa or the passage of membranes previously having been obtained.



To illustrate the various points to be referred to in discussing the nature of the specimen, Dr. Teacher showed a number of preparations from the Hunterian Museum, viz., No. 44.28, a uterus laid open to show the normal membrane, and the shape and size of the cavity; Nos. 48.109 and 48.121, showing the decidua in the later stages of pregnancy; and Nos. 48.160, 48.177a, abortions at two or three and at eight weeks, and 49.2, the uterus from a case of tubal pregnancy showing the decidua in the uterus at about ten weeks; also, microscopic sections of the specimen under discussion, decidua from a case of extra-uterine pregnancy, ordinary decidua from an abortion in the eighth week, and uterine mucous membrane.

It appeared, then, that in all cases associated with pregnancy the membrane was very much larger, and, except in the case of the very early abortion (No. 48.160), considerably (in some a great deal) thicker than that under discussion. No. 48.160 was, at most, half as large again, but shows clearly the place where the ovum, though only the size of a pea, had rested. The membrane which apparently would have been shed in No. 49.2 would not have been much thicker, but would have been very much larger. The microscopic appearances were less decided. The specimen having been sent in carbolic lotion, the cells are not perfectly fixed, and may have become swollen in consequence thereof. They have very much the character of decidua cells, being large, oval, with slightly granular protoplasm, and with large nucleus. Between them there is a considerable amount of connective tissue, which is infiltrated with numerous leucocytes. The blood-vessels are large; the epithelium of the surface and of the glands for the most part wanting.

Altogether, the minute appearances are very little different from those in the specimens of early decidua connected with extra-uterine and intra-uterine pregnancy, shown for comparison, though totally different from those which may be seen in decidua of later date. Considering all points, Dr. Teacher has no doubt that the specimen is one of menstrual decidua, although in microscopic characters the membrane is less like normal uterine mucous membrane than such a tissue is stated in the text-books to be.

*Dr. J. K. Kelly* was doubtful if the specimen could be considered as one of a true menstrual decidua. There was nothing in the history of the case to prove that the patient was not pregnant. To be considered a menstrual decidua, it should be discharged at a number of menstrual periods.

Usually one found such a condition as the result of membranous endometritis, a condition which was clinically interesting, as it has hitherto been practically incurable. The size and shape of the specimen shown indicated to his mind that the case had been one of abortion. He would like to know if the cervical portion had been examined; one would expect to find fibrin and blood in this region prior to the extrusion of the ovum. The size indicated an enlargement of the uterus, and he was therefore inclined to the view that the patient had been pregnant.

In reply to Dr. Kelly, *Dr. Teacher* maintained that, in spite of the defective history, the specimen was what he had taken it to be. There was no reason to doubt the patient's statement, which was that it could not be an abortion as there had been no coitus. Dr. Holmes was perfectly satisfied as to the veracity of her statements. There was certainly no trace of ovum, nor of any place where it could have lain; also, it was clear that the tail of the specimen was mucous membrane, and not a mere unorganised trail. The specimen was very much smaller than any abortion with complete decidua that he had seen. However, he would be very pleased to enquire further into the history of the case, and re-examine the specimen, and report to the Society at next meeting.

#### IV.—EYE SPECIMENS.

By DR. M. L. TAYLOR.

The three specimens of eyes which I bring before the meeting to-night are not what one might call uncommon, but each has a certain amount of interest attached to it.

The first one is that from a child, *æt.* 2½ years. In it there is a very small melanotic sarcoma of the choroid, situated near the equator of the eyeball, and considerable sub-retinal exudation has taken place, so that the retina has been detached from the optic nerve entrance to slightly beyond the equatorial region, and it is bulged forwards so that at one part it comes to lie within a millimetre of the lens. This detachment and the bulging forwards gives it a funnel-shaped appearance on section, with the apex at the optic nerve entrance. Microscopic examination of the tumour showed it to be of the spindle-called variety, and in parts there was a considerable amount of pigment present, in all probability derived from the choroidal pigment. The chief points of interest, then, with regard to this eye are, the presence of the sarcoma in so

young a child, and the great retinal detachment, causing a white reflex to be seen on ordinary examination of the eye, so that it was taken for the more common growth in the eye at this age, namely, glioma of the retina.

The largest number of cases of glioma in this situation occur under the age of 10, and in this particular case it was only on microscopic examination that the growth was found to be a small melanotic sarcoma with great retinal detachment due to serous exudation. The only method of treatment in such cases, of course, is early enucleation of the eyeball before secondary extension has taken place.

The second specimen is that from a case of chronic glaucoma in a woman, æt. 68. The eye was enucleated on account of the long standing glaucoma, and also because of the presence of a corneal ulcer with hypopyon. The special interest with regard to this eye is the presence of a well-marked posterior staphyloma, and also another in the equatorial region. On examining the specimens you will also notice that the eye is a very large one, and the sclerotic is extremely thin, especially in the region of the posterior staphyloma, so thin here, in fact, that it looks as if it were almost on the point of rupturing. The presence of a staphyloma, so far as I am aware, is not at all common in glaucomatous eyes, and yet that is just the sort of condition in which one would expect to find one or more, owing to the great increase in the intra-ocular tension which is present. The other pathological conditions which are present are those usually met with in glaucoma, namely, the shallow anterior chamber, blocking up of the corneo-iritic angle, cupping of the disc, &c. You will see from the specimen under the microscope that the corneo-iritic angle here is filled up with pus corpuscles, chiefly degenerated polymorphonuclear leucocytes.

The third specimen is that of an injured eye in which there is complete dislocation of the lens beneath the ocular conjunctiva. The commonest dislocation of the lens is either forwards into the anterior chamber, or backwards into the vitreous, and this case illustrates very well, perhaps, the most uncommon form of dislocation of the lens. In order that it may occur it is necessary that the sclerotic be ruptured. On examination of the section of the eye you will see that the lens, which is still intact, is lying immediately beneath the bulbar conjunctiva and external to the sclerotic, just at the side of the cornea. The position which the lens occupied

normally is now filled up with fibrin and old blood-clot. The wound in this case was caused by a cow's horn, and the eye was enucleated eight weeks after the injury on account of commencing sympathetic ophthalmia.

*Dr. Maitland Ramsay* remarked that, with reference to this specimen of glaucoma, the condition was secondary to inflammatory intra-ocular changes, and on this account the "cupping" was not so characteristic as in other cases.

*Mr. Rowan* would like to know the history of the case. To his mind the eye presented the condition of myopia, and this would sufficiently account for the staphyloma.

*Dr. Taylor*, in reply, was sorry to be unable to give any account of the patient's power of vision.

V.—COMPOUND FRACTURE OF THE FORE-ARM, GANGRENE OF PARTS BELOW SEAT OF FRACTURE, DUE TO TEARING OF RADIAL, ULNAR, AND ANTERIOR INTEROSSEOUS ARTERIES AT THE SEAT OF RUPTURE.

BY MR. G. H. EDINGTON.

This specimen was obtained from a patient in Professor Hector C. Cameron's wards. The following is a summary of the history of the case:—

Neil M'G., aged 21, was admitted to the Western Infirmary on 14th March, 1900, with a compound fracture of the right fore-arm. While at work on the day of the accident the patient got his hand severely crushed between two heavy boxes. On his admission to the infirmary it was found that he had sustained a compound fracture of both the radius and ulnar in their lower fourths. The condition was treated antiseptically, and the limb put up in splints. On the day following it was observed that there had been considerable oozing of blood, and this necessitated changing of the dressings. When this was being done it was noted that the parts below the seat of fracture were livid. The sensation, however, was good. From this time till four days later great pain in the hand was complained of, and it was then seen that gangrene had ensued, this being evidenced by swelling, loss of sensation, vesication, and bluish-black discolouration of the part. Amputation in the upper third of the fore-arm was performed two days later by Dr. Cameron.

The chief points noted in dissecting the parts were as follows:—

A transverse wound, closed by sutures, was present on the posterior aspect of the radial portion of the fore-arm, 3·5 cm. above the level of the wrist-joint. At the same height above the joint was a punctured wound on the ulnar side of the limb. These wounds communicate with the seat of fracture. The parts below were gangrenous.

Dissection of the soft parts showed an almost complete absence of blood extravasation at the seat of fracture. The radial and ulnar arteries were torn clean across, and their upper ends had retracted slightly above the level of the gangrene. Their mouths were completely blocked with clot. The anterior interosseous artery was torn across and plugged with clot just where it passed under the pronator quadratus muscle. This muscle, as also the flexor profundus and radial portion of flexor sublimis, was considerably lacerated. The nerve trunks were, to the naked eye, uninjured.

The radius was fractured transversely about 3·5 cm. from its lower end. The lower end of the upper fragment was very much compressed in an antero-posterior direction, and projected forwards from the line of the shaft, forming a middle fragment, nearly 3 cm. long, attached above by periosteum to the front of the shaft of the bone. Its projection forwards allowed of the lower fragment being drawn up behind to a distance of nearly 3 cm.

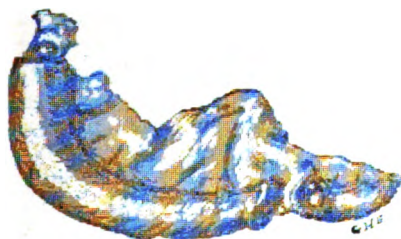
The ulna was fractured obliquely in a line running downwards and outwards, and its lower fragment was pulled upwards, inwards, and forwards for a distance of 2·5 cm. The edges of the fragments presented no immediate relation to the seat of injury in the blood-vessels at the time of dissecting, but it is probable that they were at least partly responsible for tearing of the arteries. The escape of the ulnar nerve is remarkable, when one views its intimate relationship to the artery.

#### VI.—CARD SPECIMENS.

By MR. G. H. EDINGTON.

1. *Appendix, perforated in two places—Thrombosis in mesentery.*—Young man, æt. 21. During six weeks previous to the operation, had had one or two slight attacks diagnosed as appendicitis. About twenty-four hours before operated upon, he was seized with sudden pain in the abdomen, followed by collapse. There was great distension of the abdomen, and gurgling on palpating the region of the cæcum. The abdomen

was opened in the right iliac fossa, and quantities of watery pus, with faecal odour, poured out. The appendix was discovered in the pelvis, and was non-adherent. It presented two perforations, one about three quarters of an inch from its junction with the caecum, and the other about half an inch from its terminal extremity. The mesenteric vessels were thrombosed, and no bleeding took place when mesentery cut through. The serous coat of the caecum and small intestine were deeply injected, as also the peritoneum over the appendix. The appendix was removed by cutting through its mesentery. The proximal stump was ligatured, and the open end touched with liquefied carbolic acid. A drainage-tube of large calibre was passed down into the pelvis, and the abdominal wound sutured in layers. The patient did not rally, and died within twenty-four hours of the operation.



Actual size of part after hardening in formalin.

The specimen (see illustration) represents the parts as removed. The mucous membrane has prolapsed through both ruptures. In the illustration this is somewhat exaggerated so far as the proximal perforation is concerned, as this portion of the appendix was clamped with pressure-forceps at the time of the operation. The mesentery, which was fatty and much swollen, extended to the extreme tip of the organ.

The specimen was removed from a private case by Professor Hector C. Cameron.

*(The report of this Meeting will be continued in our next issue.)*

## OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1899-1900.

MEETING VII.—28TH MARCH, 1900.

*The Vice-President, DR. ROBERT JARDINE, in the Chair.*

## I.—SPECIMENS.

## A. BY DR. JOHN EDGAR.

Dr. Edgar showed the following specimens:—

1. Fallopian tube with blood-clot; most probably due to a tubal gestation. A large corpus luteum is present in the corresponding ovary. No chorionic villi were found in microscopic section.

2. Melanotic sarcoma of right labium. The vagina was also involved, and the inguinal glands were enlarged,

3. Inverted uterus removed by hysterectomy, after all possible methods at replacement had failed.

## B. BY DR. FORTUNE.

Dr. Fortune showed microscopic sections of the following:—

1. Epithelioma of cervix.

2. Portion of cervix removed for diagnostic purposes—simple hypertrophy.

3. Fragments removed by curette from interior of uterus—adeno-carcinoma.

## II.—TWO CASES BEARING ON MENSTRUATION.

## BY DR. E. A. GIBSON.

Dr. Gibson's paper appears as an original article at p. 108.

*Dr. Jardine* referred to a case where a discharge of blood occurred at each menstrual period from a sinus in the abdominal cicatrix of a woman on whom he had performed Cæsarean section. As regards the occurrence of menstruation after removal of the ovaries, it had always to be remembered that sometimes portions of ovarian tissue were left behind, and that occasionally there was a third ovary.

*Dr. Edgar* thought that, in a very great number of the

cases of menstruation after removal of the ovaries, it was due to leaving a small part of ovarian tissue behind. Still, he was quite convinced that in many cases that could not be the reason. He did not think that the control of the menstrual cycle resided in the ovaries alone.

*Dr. Balfour Marshall* gave his personal experience of a case where, after total extirpation of the uterus and ovaries *per vaginam*, a periodic discharge of blood continued from the cicatrix in the vault of the vagina.

*Dr. Russell* mentioned a case of regular menstrual discharge from an abdominal scar. The patient was a young married woman, whose abdomen he had opened to remove what appeared to be a simple broad ligament cyst, but turned out to be a right ovarian cyst, adherent to the greater part of the bladder. The case had unusual features of some interest, and it will probably be published at a later date. The interesting point, so far as this discussion was concerned, was that the left ovary was flattened over and intimately adherent to the fundus uteri, and as, in attempting to remove it, there was free bleeding, the raw surface was stitched into the abdominal wound, being in effect a ventro-fixation. The wound healed up completely to all appearance, but every month since the operation a slight hæmorrhagic discharge has taken place at the site of the wound simultaneously with the usual menstrual flow. With regard to the case of menstruation persisting after removal of the ovaries, *Dr. Russell* believed that many, if not all, the cases reported were due to the leaving of a small bit of ovarian tissue. He had, while assisting others in ovari-tomies, observed occasionally how difficult it was to be quite sure that all the ovarian tissue had been removed. Oöphorectomy itself was, of course, a much easier procedure. In the case mentioned, which was admittedly a difficult one to remove completely owing to its adhesions, it seemed as if the ovarian structure was laid bare in the incision, suggesting the possibility of some being left on the other side of the incision, in the part to which the ovary was adherent.

### III.—AN INSTRUMENT DESIGNED TO PREVENT RUPTURE OF THE PERINEUM DURING PARTURITION.

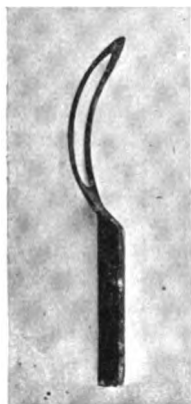
BY DR. ALEX. MACLENNAN.

Any appliance which aids in retaining the integrity of the perineum requires no apology for its existence. That the perineum is often ruptured is proved by gynæcological hospital



statistics. I am not one of the fortunate men who are able to say that they never allow the perineum to tear, so I have looked for means to help me to save my patients future trouble.

The instrument, which has been made for me from a pattern by the Medical Supply Association at a cost of 14s., has the following points:—It is made from a flat piece of steel (plated), the hollow handle being formed by turning round the margins so as to leave a space of half an inch for the purpose of cleaning.



Its dimensions are:—Length,  $10\frac{3}{4}$  in.; handle,  $4\frac{1}{4}$  in.; blade (circumferential measurement),  $6\frac{3}{4}$  in.; the diameter of the arc enclosed by the blade, 6 in.; breadth of the blade (which is also curved from side to side),  $1\frac{7}{8}$  in.; breadth of the fenestra,  $1\frac{1}{4}$  in. The thickness of the blade is slightly less than that of the ordinary forceps.

Its mode of action is as follows:—The instrument is inserted shortly before the head is about to pass the vulva, so as to lie over the brow and face of the child, the patient being in the usual position. The left hand of the accoucheur grasps the handle of the instrument, while the thumb of the right hand placed in the fenestra graduates the pressure.

Rupture of the vagina, where not due to mechanical interference, is secondary to, and an extension of, rupture of the perineum. The instrument extends to the perineum the same kind of support as is given to the vagina by the sacrum and coccyx, and, indeed, may be looked upon as a continuation of these structures. The head can be controlled most effectively as regards advance as well as flexion. In some cases where considerable forward pressure has to be exerted on the head, so as to save an otherwise unavoidable rupture, anterior lacerations are produced. Such, apart from the hæmorrhage which often follows, are of very slight importance. They heal, too, very readily. The anterior lacerations, laterally placed as regards the meatus, are a sort of spontaneous natural episiotomy.

In reply to Dr. Kerr, *Dr. Maclellan* said that either the skin or mucous membrane of the perineum might rupture independently, but that the instrument, by keeping the head

away from the perineum, would prevent a tear from starting, or if already begun, from extending. The instrument was not used as a tractor. It was to be recommended in every case of first delivery.

In reply to Dr. Adamson—the instrument was not employed with the forceps, but in forceps cases after their removal, the expulsive force necessary to complete the final act of delivery of the head being applied digitally from behind, or through the rectum when necessary.

#### IV.—NOTES ON EIGHT LABOURS COMPLICATED BY TUMOURS.

By DR. ROBERT JARDINE.

Dr. Jardine's paper appears as an original article at p. 97.

*Dr. Richmond* (Paisley) gave his personal experience of two cases of tumours complicating labour, one a myoma of uterus and the other an osteoma of sacrum.

*Dr. Edgar* referred to the danger of dragging a child through a pelvis narrowed by a tumour.

*Dr. Munro Kerr* referred to the injurious effect on the tumour that resulted sometimes from long-continued pressure upon it by the presenting head. So great was the pressure that sometimes the tumour became quite dead. In illustration of this, he mentioned a case that had recently been seen by him.

## GLASGOW SOUTHERN MEDICAL SOCIETY.

SESSION 1899-1900.

MEETING XV.—5TH APRIL, 1900.

*The President, DR. HUGH KELLY, in the Chair.*

### REMARKS ON ANÆSTHESICS AND THEIR ADMINISTRATION AT THE VICTORIA INFIRMARY, WITH DEMONSTRATION OF APPARATUS.

By DR. DAVID LAMB.

In the course of a lengthy address, Dr. Lamb gave an interesting description of the different forms of apparatus at present in use in the Victoria Infirmary. Proceeding, he gave a detailed account of the advantages of the various anæsthetics, including in his review chloroform, ether, and nitrous oxide

gas with oxygen. Speaking generally, he maintained that, in the selection of any particular anæsthetic, while each case had to be considered on its merits, he had a decided preference for the mixture of chloroform, ether, and alcohol—known by the name of the A.C.E. mixture.

*Dr. Eben. Duncan*, remarking on the subject, said that he had used chloroform almost exclusively, and never had an accident with it. Some time ago a case of a young man came under his observation who died quite suddenly under chloroform, and at the *post-mortem* examination no pathological condition was found to account for the sudden death. He confessed that it was difficult to explain such cases of syncope; but he had noticed that fainting took place most readily in people of a stout and flabby habit, the subjects of more or less anæmia. According to Professor Ramsay, chloroform, when kept in contact with atmospheric air, underwent a change in its composition, a condition which could be obviated by keeping the chloroform in the presence of slaked lime. Regarding the anæsthetic powers of ethyl bromide, he found that it did not relieve the spasm of the abdominal muscles, and in some cases defæcation took place while the patient was under the influence of the drug. It was the general belief that ether was safer than chloroform, but of all anæsthetics he preferred nitrous oxide gas with oxygen, on account of its greater safety over either chloroform or ether.

*Dr. Alex. Miller* remarked that at one time he used the A.C.E. mixture, but, finding it slow in its action, he reverted to the use of chloroform. With regard to the bromide of ethyl, he found it rapid and quite satisfactory in its action.

On the motion of the *President*, a hearty vote of thanks was awarded *Dr. Lamb* for his demonstration and address.

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#### MEETING XVI.—19TH APRIL, 1900.

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*The President*, DR. HUGH KELLY, in the Chair.

##### I.—A WOUNDED SOLDIER FROM MAGERSFONTEIN.

SHOWN BY DR. M. DUNNING.

*Dr. Dunning* introduced for inspection a soldier of the Highland Brigade who was severely wounded before the

trenches at Magersfontein. The bullet, which was from the Mauser rifle, entered the abdominal wall a little below and to the left of the umbilicus, and made its exit in the upper part of the gluteal region, a little below the spine of the ileum. The small scars produced by the entrance and exit of the bullet were examined with great interest by the members.

## II.—NOTES ON SIX CASES OF PUERPERAL ECLAMPSIA TREATED BY SALINE INFUSIONS.

BY DR. ROBERT JARDINE.

Dr. Jardine's paper will appear as an original article in a future issue of the *Journal*.

*Dr. Alex. Miller* congratulated Dr. Jardine on the fact that he was among the first in this country to adopt this line of treatment in puerperal eclampsia. Proceeding, he remarked that one of the arguments brought forward against this method of treatment was the length of time that the diuresis took to act; but in spite of this he thought that the treatment of this affection by saline injections was the proper one.

*Dr. L. Burges* maintained that, owing to the different methods of treatment and the various drugs used by Dr. Jardine, it was difficult, in his opinion, to differentiate the value of each drug, and especially of the value of the saline infusion.

*Dr. John Dunlop* briefly described a case that had come under his observation, where a wonderful result was produced by the process of blood-letting.

*Dr. T. W. Jenkins* also commented on the multiplicity of lines of treatment that had been used by Dr. Jardine in the cases described. On account of this there was some difficulty in arriving at any logical inference of the value of the saline infusions in the cases given. He had no doubt, however, in his own mind of the efficacy of the injections of salines in the treatment of this affection.

*Dr. Wright* enquired as to the *rationale* of the treatment, and suggested that some cases of this disease were of the nature of epilepsy.

*Dr. Coulson Howie* made some remarks, and said that in such cases he found benefit from the use of pilocarpine, and from the injection of chloral into the rectum.

*Dr. Jardine*, in reply, stated that the view of the pathology of puerperal eclampsia was that there was a poison in the blood, and that his object of treatment was the removal of

this poison. If the patient was able to swallow, salines were given by the mouth to stimulate the action of the bowel, and the imperial drink was given so as to stimulate the kidneys. With regard to blood-letting, it was his opinion that in people of a plethoric habit good results could be got. In the cases described by him that night, blood-letting, however, did not seem to him a proper method of treatment. Speaking of the value of pilocarpine, he believed there was great danger of oedema of the lungs, especially when the patient was in a weakened and unconscious condition.

On the motion of the *President*, Dr. Jardine was accorded a cordial vote of thanks for his interesting contribution.

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## REVIEWS.

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*The Hygiene of Transmissible Diseases.* By A. C. ABBOTT, M.D. London: The Rebman Publishing Co., Limited. 1899.

THIS work deals with that part of the very large subject of hygiene which has to do with the causation and transmissibility of the infective and contagious diseases, their modes of dissemination, and their prevention. In treating of the predisposing causes of disease, the author points out in what manner age, sex, and race affect the problem. Culling mainly from United States' statistics, he points out, generally, that the death-rates of the negro population, as compared with those of the white, are much higher; at the same time, he is careful to indicate that social conditions probably form as important factors in such results as racial peculiarities. In discussing the relative predisposition of the Jewish race to that of other peoples, he corroborates the well-established fact that the Jews are more immune to tubercular and acute infective diseases generally; but, quoting from Billings' *Vital Statistics of the Jews of the United States*, he shows that, in respect of diphtheria, diarrhoeal diseases, and diseases of the nervous system, they have a relatively higher death-rate than their fellow-citizens of other nationalities. He attributes the comparative longevity of the Jewish race—and we agree—to the punctilious observance of the Talmudic regulations regarding the hygiene of the home, of the person, and of food.

We dismiss this by remarking that it would be very remarkable indeed, were the result otherwise, because there is no other nation in which, for so long a period, have hygienic principles been pursued; at the same time, such a result ought to be an object-lesson to other peoples, and worthy of emulation.

Of the other influences predisposing to disease generally, he instances occupation. Following in this the statistics of Ogle, he, however, takes no note of the investigations of Bertillon, Arlidge, or Ward Richardson.

In considering the effect of density of population upon disease-production, the author avails himself of the main facts of Dr. J. B. Russell's paper on the "ticketed houses" of Glasgow; and, respecting heredity, he is of the school of those who believe that it acts more "through the transmission of a peculiar habit of body than by the transmission of disease itself," while, at the same time, he indicates that that statement does not embrace the entire truth, or the last word, on the subject.

Seasonal influences upon disease form an interesting section of a chapter. Malaria prevails most in the autumnal months of August, September, and October; diarrhoeal diseases in American cities cause the greatest mortality during the time of greatest heat—viz., July; and enteric fever, to which, throughout his book, he gives the older name of typhoid fever, prevails in America, as in Britain, most largely in the months of autumn. On this subject we would only remark in passing that the intimate factors which contribute to the larger prevalence of hæmatozoa and micro-organisms during these periods are not yet sufficiently comprehended to enable observers to do more than note such facts as the above.

The second section of the work treats of the transmissible diseases. Illustrative of the transmissibility and dissemination of enteric fever, there are some excellent charts and diagrams, which demonstrate the relation of this disease to polluted water-supplies, its relative prevalence in sewered as compared with non-sewered populous places, and of its comparative less prevalence after the introduction of sewers into cities and towns previously non-sewered. He points out that the average death-rate per 10,000 in cities that have a good water-supply and are well-sewered is 2·4, whereas in cities without sewers, or imperfectly sewered, it is as high as 10 per 10,000; and, further, that in every city of the Continent, of America, and of Great Britain, where a good water-supply and sewerage system have been installed, very considerable

reductions in the death-rates from this disease have resulted. Respecting its dissemination by polluted water-supplies, maps and plans illustrative of the epidemics of Lausen and of Wittemburg, on the Continent of Europe, and of Plymouth and Philadelphia, in America, amply prove his theses; and, as a very significant illustration of the value of the filtration of a water-supply, he instances Hamburg, where the death-rate from this disease fell from 39.7 to 5 per 100,000. In this connection, we miss any reference to the Maidstone epidemic. The same plan of treatment has been followed respecting cholera, and the incidence of this disease in Hamburg and Altona with reference to the water-supply is illustrated by a map. In Hamburg, where the water was delivered unfiltered, there were 264 cases per 10,000 of population; and in Altona, where it was filtered, there were only 34 cases per 10,000.

We regret to see the subject of "tropical dysentery" dismissed in a couple of pages, since this is one of the most troublesome diseases of warm and tropical climates.

The author adds nothing new to the subject of tuberculosis. He regards human, bovine, and avian tubercle as identical in entity, deems indiscriminately scattered expectoration as one of the chief causative factors of dissemination of the disease, advocates compulsory disinfection thereof as the best preventive measure, offers no opinion on the subject of ranking it among the other infective diseases, and dismisses the relation of its production to the flesh meat supply in about a dozen lines.

Respecting diphtheria, he notes that the experience of the Health Laboratory of Philadelphia shows that the average period of duration of the bacillus in the throat, dating from the establishment of its presence by bacteriological diagnosis, is twenty-nine days; but the extremes of time vary from seven to one hundred and twelve days.

Bubonic plague he identifies, we think very properly, with the "Great Plague" of London, and with the "Black Death." It is interesting to note—since the fact is not alluded to in any manual of hygiene with which we are acquainted—that one of the most graphic clinical accounts of the black death is to be found in the induction of the *Decameron* of Boccaccio, where he describes its outbreak and spread in Florence in 1348. "It began with young children," says he, "male and female, either under the armpits or in the groin, by certain swellings, in some the bigness of an apple, in others like an egg, and so in divers greater or lesser, which in their vulgar language they termed to be a botch or boil. In very short

time after, those two infected parts were grown mortiferous, and would disperse abroad indifferently to all parts of the body; whereupon, it was the quality of the disease to show itself by black or blue spot, which would appear on the arms of many, others on their thighs, and every part else of the body—in some, great and few; in others, small and thick." He further tells how the lower animals were affected, instancing two pigs that tossed the clothes of a dead body lying in the street, upon which they fell dead. The prophylactic measures which the author advises do not include any account of the special researches of Dr. Marsh, of Glasgow—at present on plague duty in India—on efficient measures for the disinfection of the earthen-floored huts of the native Indian population.

The author devotes well-deserved attention to the subject of venereal diseases viewed in their State relations; and, while he urges continency and celibacy as the most effective personal preventive measures, he does not hesitate to pronounce the opinion that, in view of the known existence of these diseases, and the disastrous results which follow in their train, administrative measures by the State for their repression are urgently and imperatively demanded.

Dealing with leprosy, the writer gives the usual information respecting the intimate cause of the disease; but respecting its genesis, or the modes by which it is initiated, he has no theory to add to the many existing ones. It seem to us as a most remarkable fact that, respecting a disease which is, clinically, as well described in the pages of the Old Testament as in the most modern text-book, we are to-day no nearer its mode of transmission than in the days of Moses.

The subjects of glanders, actinomycosis, small-pox, malaria, and other diseases are severally discussed by Dr. Abbott, and, probably, of these named, the treatment of malaria is the best, as embodying the results of the latest investigations; but while he mentions the work of foreign workers, he gives no place to that of Manson, Ross, and others among British workers.

From careful investigation of the researches of Sanarelli and others respecting the prime causative factor of yellow fever, Dr. Abbott reaches the conclusion that the *bacillus icteroides* of Sanarelli is not that factor, and he hazards the view that it is more likely to be a hæmatozoon, zoologically allied to the malarial parasite.

He next gives a compendious but comprehensive account of the diseases in man due to the highly-developed animal



parasites, and in connection with filariasis, he does justice to the luminous researches of Manson.

In the chapter on prophylaxis in general against infective diseases, due consideration is paid to the entrancing subject of immunity, regarding which he places before the reader the views of Buchner, Behring, Ehrlich, and Pfeiffer, and, although the subject is by no means exhaustively treated, we are of opinion that, after perusal of the chapter, the reader will have received a fairly accurate conception of the subject.

Vaccination, protective inoculation, antitoxins, and serum-therapy receive some attention.

Classified under the heading of chemical and physical prophylactic measures is disinfection. Sulphurous acid is characterised as a disinfectant of the "greatest general usefulness," although in a few sentences farther on we are informed that its usefulness is comparatively limited. We are personally of opinion that, as ordinarily carried out, there is no more delusive form of disinfection; and we trust that sanitarians and writers on sanitary science will soon take courage to give it its quietus, and every other mode of "aërial" disinfection. The author pins his faith to formaldehyde gas for room-disinfection, generated either from tablets of polymerised formaldehyde, or from a watery solution of formalin, with 10 per cent of added glycerine. But he advocates, after such disinfection, that the ceilings and walls of the infected room should be wiped down with cloths wrung out of 3 per cent carbolic acid solution, 1:2000 solution of corrosive sublimate, or 5 per cent of chloride of lime. The Continental modes of treatment are dismissed in a few lines. Of the other germicides, he highly recommends the cresols, especially when mixed with an equal volume of sulphuric acid, coldly advises the use of corrosive sublimate, and heartily praises the usefulness of chloride of lime. Disinfection by steam under pressure receives due consideration, and the "King-Sprague" disinfector is given as an illustration of an excellent form of apparatus. Other apparatus are not mentioned, and that of Thresh, the principle of the operation of which differs so much from the usual steam apparatus, seems to be unknown to the author.

In discussing the disinfection of places, Dr. Abbott includes the disinfection of wells and cisterns. The author emphasises the fact that all drinking-water should be above suspicion of pollution—a proposition to which everyone will agree; but what is to be done where the only available well has become polluted? This is what he advises:—To pour into the well-

water a mixture of equal parts of raw carbolic acid and sulphuric acid until the mixture reaches 5 per cent of the well-contents; thereafter pump out the contents, allow the well to refill, and re-pump again and again till all traces of the disinfecting mixture have disappeared. These are difficult, and, perchance, dangerous measures, which, moreover, occupy some time, during which the consumers must look for other sources of supply. Besides, easier and equally efficient measures could be adopted. Why should not all the water for cooking and drinking purposes be properly boiled, and then filtered, if necessary, through a periodically cleansed filter? Or why should not Koch's mode of dealing with such a contingency be adopted—viz., by filling the well with clean sand to the level of the *lowest* summer water-level, and placing in its centre an iron tube with its lower end expanded and perforated, through which the filtered water might be pumped to the surface.

It is, indeed, difficult to comprehend such advice as the above, especially when the author, speaking of the purification of potable water by boiling, says that "no process of chemical disinfection can in any way compare with this method from the standpoint of safety and practical utility." Boiling, therefore, could be continued in a contingency such as the foregoing until, at least, a new source of supply of good wholesome water was available.

After careful perusal, however, of the book as a whole, we have formed the opinion that it will form a serviceable guide to the student of public health, and so we commend it to our readers. The illustrations are very apt and good, and the whole "get up" of the book sustains the reputation of the firm which publishes it.

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*An American Text-Book of Surgery.* Edited by WILLIAM W. KEEN, M.D., LL.D., and J. WILLIAM WHITE, M.D., Ph.D. Third Edition. London: Rebman, Limited. 1899.

IN the present edition of this standard work on surgery, the volumes have been brought up to date by the introduction of several paragraphs dealing with such subjects as orrhoterapy, leucocytosis, lumbar puncture, forcible correction of angular curvature of the spine, hand-disinfection, &c. The account which is given of skin-grafting calls for notice, and the paragraphs on Schleich's method of producing local anæsthesia is also good. In this subject, however, no mention is made of the *endermic* injection of the drug.

Speaking generally, the treatment of the newer subjects, while necessarily brief in a work such as the present, is nevertheless clear, and should give the student a good idea of the present-day application of the art of surgery.

Praise must be given to the coloured plate which illustrates diseased conditions of the vermiform appendix, and in this subject the text is carefully and thoroughly worked out. As in the previous editions, the wealth of illustration is a noticeable feature.

One or two mistakes occur in the index, and we are told in the section on kidneys that horse-shoe kidney usually depends on the union of the *upper* ends of these organs.

We can recommend the book to students, both on account of the comprehensiveness of its contents and on its readable style.

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*Transactions of the American Surgical Association.* Vol. XVII. Edited by D. FOREST WILLARD, M.D. Philadelphia: W. J. Dornan. 1899.

THE volume contains the papers read at the meeting of the Association in May and June, 1899, and opens with a communication on total laryngectomy, by W. W. Keen. The *technique* of the operation which he performed may be summarised as follows:—Trendelenburg position, thyrotomy, freeing of larynx, low tracheotomy, division of trachea, separation of larynx from œsophagus, suture of anterior wall of pharynx to infrahyoid tissues, suture of trachea to skin, withdrawal of tracheotomy tube, closure of skin incision above. He thinks the tracheotomy might have been dispensed with. Military surgery forms the subject of papers by Senn, Fowler, and Nancrede, while Estes has a contribution on the subject of gunshot wounds in civil practice. There are three papers on appendicitis. The first of these, by Richardson, is good, and, in the discussion which follows, one notes the general tone in favour of conservative measures in dealing with acute cases, and the appreciation of the dangers of breaking up adhesions by a search for the appendix. The second is on the subject of hernia in the operation scar (Harrington). The tendency to this will be lessened by avoiding drainage (if possible), by cutting in the length of muscular and tendinous fibres, and by suturing in layers. Mechanical appliances (belts) are harmful, while exercising the abdominal muscles is to be recommended. Van der Veer's

paper on unusual cases of appendicitis is very indefinite. Kocher, of Berne, has a long contribution on hand-disinfection, of the which the main feature is the *questio vexata* of operating in gloves. If required at all, they are especially useful at the stage of ligaturing and suturing, to obviate contamination of the materials used for these purposes. "Nephrectomy *versus* Nephrotomy" is gone into by Ransohoff. Cushing describes a "right-angled" continuous intestinal suture, and also a method whereby the periosteum is used to replace tibiæ necrotic from acute osteomyelitis. Some shorter contributions, including a case of removal of œsophageal diverticulum (Hearn), and a description of Laplace's forceps for intestinal anastomosis, close these *Transactions*.

There are numerous illustrations of high quality throughout the volume, which itself represents a large amount of work, and which speaks well for the character of the meeting of the Association.

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*A Manual of Gynæcological Practice for Students and Practitioners.* By Dr. A. DÜHRSEN. Second English Edition. Translated and Edited from the Sixth German Edition by JOHN H. TAYLOR, F.R.C.S., and FREDERICK EDGE, M.D.Lond., M.R.C.P., F.R.C.S. With 125 Illustrations. London: H. K. Lewis. 1900.

THERE is a tendency at the present day to write very large books on all medical and surgical subjects. The book before us is a happy exception. In 276 pages Dr. Dührssen has given us an exceedingly well written manual of gynæcological practice, which should be of great use to students and practitioners alike. The anatomical introduction is a mere sketch, but it is sufficiently full to refresh the memory of the anatomy of the female genital organs. The description of the methods of examination, and the aseptic precautions to be taken as regards instruments, &c., are very clear and detailed.

The author's method of vaginal fixation of the uterus, which is somewhat modified from that first introduced by him, is very fully explained. His results have been exceedingly good, and later pregnancies have not been adversely influenced by the fixed position of the uterus. All operators have not been so fortunate in this respect. He is a strong advocate of the vaginal route for hysterectomies, removal of small fibroid, or ovarian tumours, &c.

In regard to the treatment of bleeding fibroids, he does not

seem to go in largely for the removal of the tubes and ovaries, neither does he seem to regard Apostoli's method with much favour. He considers that curetting, and the application of caustics or vaporisation with steam at 100° C., answers the purpose better. We can hardly agree with him that small myomata should be removed as soon as diagnosed.

In speaking of carcinoma of the uterus, he holds that it is local in the beginning, and can be permanently cured if operated on soon enough by total extirpation. He says—"Every woman who, after the cessation of menstruation, has again commenced to bleed, should be considered as carcinoma-tous until the surgeon has investigated the case, and found no sort of sign of carcinoma." We entirely agree with this.

The book is well illustrated, but some of the plates have been badly printed. The translators have done their work so well that it is difficult to realise that it is a translation. The explanatory notes they have added are useful. To our mind "the renowned English gynaecologist" does not convey a true description of the great Simpson. The translators can hardly urge the Poet Laureate's excuse. We may give up much to the "predominant partner," but Simpson must ever remain a Scotsman.

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*The Frog: An Introduction to Anatomy, Histology, and Embryology.* By the late A. MILNES MARSHALL, M.D. Seventh Edition. Edited by G. HERBERT FOWLER, B.A., Ph.D. London: David Nutt. 1900.

THIS excellent little book is already too well known in its previous editions to require much notice now. The principal feature of the new edition is a series of woodcuts illustrating the development and metamorphosis of the frog. These woodcuts are, like the others, well done, and show clearly the points which it is desired to emphasise. Besides the addition referred to, there has also been added a list of illustrations, and the index has been recast.

On referring to the pages on histological methods, we find that a few improvements might well be made. Thus, formalin should be mentioned as an important fixing agent. As regards staining, the anilin dyes, which are now so important in this process, are not mentioned in the present edition. This should be corrected.

The book remains, however, one of the best introductions to the subject that we have.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### PATHOLOGY.

**Diphtheritic Paralysis and Antitoxine.**—F. Ransom carried out this research in the laboratory of Professor Behring at Marburg-on-Lahn with the object of investigating the assertion that post-diphtheritic paralysis is more frequent now than in the days before the use of antitoxine. The increased frequency is quite probable on account of the use of antitoxine being followed by diminished death-rate in severe cases, these being the cases in which paralysis is more likely to ensue. The author thinks that there may have arisen in the minds of many the idea of a direct connection between the antitoxine treatment and the paralysis. He tries to answer the following questions:—

1. In what numerical relation do the cases of paralysis stand to the number of intoxications?
2. What is the relation, if any, between the amount of toxine given and the severity or frequency of paralysis?
3. What are the results, so far as paralysis is concerned, when toxine and antitoxine are given mixed?
4. What are the results when antitoxine is given some hours after intoxication?

The animals used in the research were guinea-pigs, they being liable to very characteristic post-diphtheritic paralysis. Injections were given (a) of toxine, (b) of mixtures of toxine and antitoxine, and (c) of antitoxine alone. Two toxins were used, both of which were in the form of dry powder of about 150 times normal strength.

The paper is illustrated by an exhaustive series of tables, and the results of the investigation are as follows:—

1. Paralysis may certainly be expected after intoxication with not less than one-fourth of the minimum fatal dose. With doses between one-fourth and one-eighth paralysis occurs, but are not constant, and below one-eighth no paralysis was noticed.
2. The larger the dose of toxine the severer will be the paralysis, if the animal survives long enough.
3. Neutralised mixtures of toxine and antitoxine, containing only about one lethal dose or less, do not appear to cause paralysis.
4. Antitoxine, given fifteen to twenty-two hours after intoxicating with doses of toxine not greater than the lethal dose, exercises in large doses a mollifying influence on the subsequent paralysis. This influence is more evident on smaller doses of toxine than on such as are but little less than the minimum fatal dose. Small doses of antitoxine have no evident effect in diminishing the paralysis.
5. Transferring these results to practice amongst human beings, we may expect liberal doses of antitoxine, given early in the illness, to influence favourably the subsequent paralysis; and this beneficial influence is likely to manifest itself not so much on the local paralyses (soft palate, &c.) as on such symptoms as failure of the heart. Severe cases are, however, likely to be followed by some paralysis in spite of even large doses of antitoxine.—(*Journal of Pathology and Bacteriology*, July, 1900.)—G. H. E.

**The Action of Diphtheria Toxine on the Spinal Sticho-chrome Cells.**

*Fixation.*—Saturated solution of  $\text{HgCl}_2$  in normal salt solution is recommended.

**Embedding.**—The specimens were embedded in paraffin, and sections cut in the Rocker microtome.

**Staining.**—The following modification of Held's methylene-blue and erythrosin double-stain was employed:—The sections, fixed to the slide, were covered with fluid prepared immediately before use by mixing equal parts of a solution of methylene-blue in distilled water (0.375 per cent) and of 5 per cent watery solution of acetone. This was carefully warmed till all odour of acetone had disappeared; then allowed to cool, and sections washed in water; then stained for five to ten seconds in solution of erythrosin, 1 grm. in 50 c.c. of distilled water, to which a couple of drops of glacial acetic acid added, and again washed in distilled water. Differentiation was effected by alcohol, the process being controlled under the microscope. Sections cleared in xylol, and mounted in Canada balsam. The animals used were rabbits.

**Results.**—Diphtheritic paralysis is associated with changes in spinal cord as well as in peripheral nerves. The cellular changes are the most characteristic. They may, however, be associated with vascular changes (dilatation of capillaries). The cellular changes are very definite, and consist in chromatolysis to a moderate degree, in increased staining capacity of the achromatic substance for acid stains, and in vacuolation of the cell protoplasm. The cell-change is probably antecedent to the nerve-change in the majority of cases.—(*Journal of Pathology and Bacteriology*, July, 1900.)—G. H. E.

**Sebaceous Tumour on the Under Surface of the Penis.**—Lilienthal records the case of a patient, aged 31, whose parents had noted the tumour shortly after birth. It grew slowly till, at the time when Lilienthal saw it, it had reached the size of a very large olive, occupying the under surface of the prepuce just behind the frænum. It was of putty-like consistency. Removal was carried out under local anaesthesia.

In the discussion which followed, a similar case was mentioned as having occurred in Dr. Alexander's service at the Bellevue Hospital. In this case the tumour had been present since the age of 4 years, and it had been tapped several times. It was situated at the tip of an elongated prepuce.—(*New York Academy of Medicine, Section on Genito-Urinary Surgery*, 9th January, 1900. Reported in *The Journal of Cutaneous and Genito-Urinary Diseases*, New York, March, 1900.)—G. H. E.

**Congenital Malformation of Small Intestine.**—Zabriskie gives details of a case. J. B., aged 36 hours, admitted to hospital 2nd October, 1898. There were two motions passed during the first twenty-four hours after delivery. An enema was not successful, and vomiting of blackish material with a faecal odour ensued. A gum catheter was passed into the rectum for a distance of 4 inches, and it was noticed on withdrawal that cheesy material was adhering to the instrument. Laparotomy was performed. The gut ended blindly at middle of ileum, which was distended with gas, and much congested. The blind end of the next portion of the gut was found  $1\frac{1}{2}$  inch lower down, and attached to the first by mesentery. It was collapsed and of normal size, but 4 inches lower down there was a peanut-shaped enlargement of the gut. This, which was constricted proximally, was soft, and filled with caseous material. Resection of gut down to beyond the dilatation and anastomosis was followed by death in twelve hours. No other abnormality was found.—(*Post Graduate*, New York, February, 1900.)—G. H. E.

**Varicose Spinal Veins.**—Clarence E. Corn records this case. On opening the spinal canal there was found intradurally at the junction of the dorsal and lumbar regions a dark line. This was 3 inches long, and extended  $1\frac{1}{2}$  inch above and below the upper surface of the first lumbar vertebra, and was the varicose posterior spinal vein. The affected portion of the vessel was 5 cm. in length and 3 cm. in diameter.

The patient had suffered from excruciating neuralgic pains, eased by confinement to bed by another illness. In the extreme lower lumbar region anteriorly were two dilated veins. The absence of motor symptoms was attributed to the ample space in the region of the cauda. Microscopically, the cord was normal in the mid-dorsal region. (*New York Medical Journal*, 17th March, 1900.)—G. H. E.

### *Books, Pamphlets, &c., Received.*

Transactions of the Chicago Pathological Society, from May, 1897, to June, 1899. Vol. III. Chicago: American Medical Association Press. 1900.

Diseases of the Tongue, by Henry T. Butlin, F.R.C.S., D.C.L., and Walter G. Spencer, M.S., M.B., F.R.C.S. Illustrated with 8 Chromo-Lithographs and 36 Engravings. London: Cassell & Co., Limited. 1900. (21s.)

Year-Book of the Scientific and Learned Societies of Great Britain and Ireland. Seventeenth Annual Issue. London: Charles Griffin & Co., Limited. 1900. (7s. 6d.)

The Edinburgh Medical Journal. New Series, Vol. VII. Edinburgh: Young J. Pentland. 1900.

Medical Electricity: A Practical Handbook for Students and Practitioners, by H. Lewis Jones, M.A., M.D. (being the Third Edition of "Medical Electricity," by W. E. Steavenson, M.D., and H. Lewis Jones, M.D.) With Illustrations. London: H. K. Lewis. 1900. (10s. 6d.)

Operative and Practical Surgery, for the use of Students and Practitioners, by Thomas Carwardine, M.S. Lond., F.R.C.S. With 550 Illustrations. Bristol: John Wright & Co. 1900. (10s. 6d. net.)

Flesh Foods, with Methods for their Chemical, Microscopical, and Bacteriological Examination: A Practical Handbook for Medical Men, Analysts, Inspectors, and others, by C. Ainsworth Mitchell, B.A., F.I.C., F.C.S. With Illustrations and a Coloured Plate. London: Charles Griffin & Co., Limited. 1900. (10s. 6d.)

A Treatise on Appendicitis, by John B. Deaver, M.D. Second Edition, thoroughly revised and considerably enlarged. Illustrated with 22 Full-page Plates. London: Rebman, Limited. 1900. (16s. net.)

The Retrospect of Medicine, edited by James Braithwaite, M.D., and E. F. Trevelyan, M.D. Vol. 121 (January to June, 1900). London: Simpkin, Marshall, Hamilton, Kent & Co., Limited. (6s. 6d.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDING 21st JULY, 1900.**

	WEEK ENDING			
	June 30.	July 7.	July 14.	July 21.
Mean temperature, . . .	56·5°	58·3°	60·5°	63·3°
Mean range of temperature between day and night, . .	14·2°	14·2°	14·2°	12·0°
Number of days on which rain fell, . . . . .	4	5	5	4
Amount of rainfall, . . ins.	1·69	0·79	0·37	1·59
Deaths registered, . . .	271	290	249	317
Death-rates, . . . . .	18·9	20·3	17·4	22·2
Zymotic death-rates, . . .	3·6	3·8	2·8	4·6
Pulmonary death-rates, . .	5·0	5·1	3·9	6·8
DEATHS—				
Under 1 year, . . . . .	60	67	66	77
60 years and upwards, . .	46	45	40	49
DEATHS FROM—				
Small-pox, . . . . .	2	2	1	2
Measles, . . . . .	11	13	9	10
Scarlet fever, . . . . .	5	3	5	2
Diphtheria, . . . . .	1	...	3	3
Whooping-cough, . . . .	23	17	12	16
Fever, . . . . .	1	3	...	10
Diarrhoea, . . . . .	8	16	9	23
Croup and laryngitis, . .	3	...	...	1
Bronchitis, pneumonia, and pleurisy, . . . . .	47	40	36	55
CASES REPORTED—				
Small-pox, . . . . .	27	6	4	15
Diphtheria and membranous croup, . . . . .	5	8	2	10
Erysipelas, . . . . .	18	20	15	19
Scarlet fever, . . . . .	65	62	34	91
Typhus fever, . . . . .	...	...	...	2
Enteric fever, . . . . .	13	33	28	27
Continued fever, . . . .	...	...	...	...
Puerperal fever, . . . .	1	...	...	2
Measles,* . . . . .	211	173	85	140

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 27th July, 1900.

THE  
GLASGOW MEDICAL JOURNAL.

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No. III. SEPTEMBER, 1900.

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ORIGINAL ARTICLES.

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ON SOME OF THE DIFFICULTIES MET WITH IN THE  
SURGICAL TREATMENT OF GALL-STONES, ILLUSTRATED BY TWO CASES.<sup>1</sup>

By GEO. HENRY EDINGTON, M.D., M.R.C.S., F.F.P.S.G.,

Surgeon to the Dispensary of the Western Infirmary ; Extra Surgeon to the  
Royal Hospital for Sick Children, Glasgow ; and Visiting Surgeon  
to the Glasgow Training Home for Nurses.

I HAVE thought that the following communication might not be without interest to the members of the Society as an illustration of some of the difficulties which may be met with in the surgical treatment of gall-stones.

Two cases may seem a small text on which to found remarks, but I trust that the facts which I am about to record may prove, in your opinion, sufficient to justify my bringing them before you.

Amongst the ideal conditions in operating for gall-stones are those in which there are either no, or at least trifling, inflammatory adhesions, and in which the gall-bladder projects sufficiently to enable one to suture it to the parietal peritoneum. The absence of this latter condition was a drawback in my first case, while my second patient exemplified the difficulties caused by the presence of dense inflammatory adhesions.

<sup>1</sup> Read at a meeting of the Glasgow Medico-Chirurgical Society held on 20th April, 1900.

The presence of both of the ideal conditions above mentioned enables the surgeon to make a thorough examination of the bile-ducts as well as the gall-bladder, and, if he deem it necessary, to attach the fundus of the latter organ to the parietal peritoneum, and so provide for the subsequent escape of bile on to the surface, without risk of soiling the general peritoneal cavity. It may be objected to this latter statement that "pure bile does not necessarily set up peritonitis, as is shown in cases of injury to the normal biliary passages, with escape of bile into the peritoneum, but," to continue the quotation which I have just made from Naunyn's well-known work,<sup>1</sup> "in these cases of cholelithiasis the bile is, usually at anyrate, no longer pure, but infective."

Notwithstanding this, it has been the experience of some that, in cases where the gall-bladder is so much contracted as to make its suture to the parietes of the abdomen an impossibility, intra-abdominal tension makes it easier for the bile to pass away directly through a tube inserted into the fundus of the organ than to enter the cavity of the abdomen, and that within twenty-four to forty-eight hours plastic peritonitis shuts out the drainage-tube from the general peritoneal cavity. This statement, which is taken from Mayo Robson,<sup>2</sup> is, on the same page, accompanied by the remark that he himself has great faith in the method of packing round the tube with iodoform gauze. But, apart from the contracted condition of the bladder, the use of iodoform gauze as a packing is a help in such a case as my first, where a rent was made in the bladder wall close to the commencement of the cystic duct. The tacking down of parietal peritoneum to the fundus of the bladder, or the fixation of a portion of omentum round the tube, are methods which have also been recommended. The "ideal" method is to close the bladder and drop it back into the abdomen, but this can only apply to cases in which you can be certain that the ducts are not obstructed, and, as will be seen, in neither of my patients was this so.

Coming to the question of adhesions, should these be slight they may not give one any difficulty, as I found in Case I, and in the final operation in Case II; but when dense, as, for example, after not very remote inflammation, they may prove a source of considerable worry to the operator, and this in more ways than one. In the first place, they not only alter the relation of the parts, but may almost, if not quite, obscure

<sup>1</sup> *On Cholelithiasis*, New Sydenham Society's translation, 1896, p. 89.

<sup>2</sup> *Diseases of the Gall-Bladder and Bile-Ducts*, 1897, p. 125.

the gall-bladder; while, secondly, they may prevent an examination of the ducts, a procedure which is an essential in the technique of the operative treatment of cholelithiasis.

A contracted gall-bladder is very frequently met with in cholelithiasis; so much is this the case that its occurrence has been looked on in cases of chronic jaundice as diagnostic of obstruction by gall-stones rather than by a new growth.<sup>1</sup>

Mayo Robson<sup>2</sup> is of opinion that this contraction is due to the fact that stones seldom cause complete obstruction, and therefore there is not sufficient backward pressure to fill up and distend the bladder. But he recognises also as factors in the process that the muscular coat of the viscus contracts in efforts at expelling the obstruction. This contraction becomes in the long run continuous, and, accompanying inflammation fixing the bladder, the latter atrophies.

As regards the adhesions of the gall-bladder to the neighbouring viscera, these are the results of an inflammatory process in the walls of the bile-passages. But when the adhesion is widespread and dense, there has generally been noted that at a recent period prior to the operation the patient has suffered from an attack in which the pain has been of more than ordinary severity, and which, taken in conjunction with the general symptoms, resembles what occurs in perforation of an abdominal viscus by ulceration.

Such a history, coupled with the appearances met with at the operation, has led to the expression of the view that a perforation of the gall-bladder or ducts has probably taken place, and that the adhesions are the result of a conservative peritonitis.<sup>3</sup> That such adhesions, if seen at a period sufficiently remote from the inflammatory disturbance on which they depend, may alter in appearance very much, we know from an examination of Case II, in which, at the secondary operation, they formed very inconsiderable bands.

*Incision.*—The incision which I used was, in the first place, a vertical one of 4 inches in length, in the right linea semi-lunaris, but it was found necessary to supplement this by an oblique one running outwards from above the middle point of the vertical wound and parallel to the costal margin.

The vertical incision, sufficient when the bladder is not retracted, did not, I found, give easy access to a deeply-situated bladder or to the ducts.

Without further remarks, I will now give a short account

<sup>1</sup> Naunyn, p. 104.

<sup>2</sup> *Loc. cit.*, p. 132.

<sup>3</sup> Rutherford Morison, *Scottish Medical and Surgical Journal*, 1899.

of my two cases, drawing attention to the salient points in each.

*CASE I.—Contracted bladder—Removal of calculi—Remainder treated by olive oil injection—Recovery.*

I was asked to see Mr. B., aged 55, by Dr. Crawford, of Hamilton, in November, 1897. The patient had suffered from intermittent jaundice, with attacks of colic, for the preceding six months. He was, when I saw him, intensely jaundiced and very weak. Palpation of the abdomen showed rigidity of the right rectus muscle. Chloroform was administered, but resistance was still felt in the right hypochondrium. No prominence as of distended gall-bladder could be felt. An incision was made in the right linea semilunaris through a very fat abdominal wall. The gall-bladder was found distended and of globular shape, but the fundus was about 1 inch in from the margin of the liver. There were some adhesions between the bladder and the transverse colon. A small nodule was present on the surface of the quadrate lobe, and suggested new growth. No stones could be detected in the bladder or ducts by external examination. On picking up the bladder with artery forceps it ruptured, and a quantity of greenish bile escaped. The tear was enlarged, and the finger introduced into the cavity and down towards the ducts. After some search, a large stone of conical form was felt at the junction of the cystic with the common duct, and was removed through the bladder along with numerous small calculi (sixteen in all). Calculi were also felt lying in pouched recesses near the neck of the bladder, and one in the hepatic duct; this last was very soft, and was easily indented by the finger-nail. It was found impossible to remove the calculi from the pouches, as whenever one was got out of its recess it fell into another. In the course of the manipulations a stone of considerable size was forced out through the wall of the bladder near the neck. A large unperforated rubber tube was inserted into the bladder through the wound in the fundus, and iodoform gauze was packed round the bladder externally, as it was impossible to locate and close the rent near the neck. The vertical incision was closed by a single row of silkworm gut sutures passing through the entire thickness of the abdominal wall. The transverse incision, which it had been found necessary to make during the progress of the operation, was left open, and through it came the tube from the bladder and the ends of the gauze packing. It should be mentioned that on the upper (hepatic) portion of the bladder wall there

was a considerable thickening, somewhat softer than hepatic tissue; this the exploring finger lacerated somewhat, but whether it was thickened bladder wall or softened liver tissue I am unable to say definitely.

On the sixth day some of the gauze packing was carefully withdrawn, and again on the eleventh, and the remainder was removed on the seventeenth day, a perforated rubber tube being inserted into the cavity so left. From this bile flowed more freely than from the tube in the bladder. One week later there was still a plentiful discharge of bile from the bladder, the stools were whitish in colour, and the jaundice (which had been diminishing) became as marked as formerly. There was also pain complained of in the region of the bladder. At my suggestion the patient's doctor injected olive oil through the opening in the fundus of the gall-bladder. This was followed by cessation of the pain, and the motions were thereafter well coloured. Four days after the injection the flow of bile from the fistula ceased.

The patient subsequently made an uninterrupted recovery, and when I saw him in the end of February, 1898, he was well and strong. The cicatrix was sound, but on his coughing I could feel friction in the neighbourhood of the gall-bladder, and he told me that he had an occasional "stitch" in this region. The stones, which I now show you, weigh, in dried condition,  $91\frac{1}{4}$  grains. They belong to the variety known as laminated cholesterin.

The points of interest in this case are—

(1) The impossibility of attaching the bladder to the parietal peritoneum or of stitching the rent in the wall of the viscus, and the use of iodoform gauze packing in this connection;

(2) That the stones were not discovered until the bladder had been opened;

(3) The pouches at the neck of the bladder, containing stones which could not be extracted (these were evidently exaggerations of the hollows between the folds which are normally present in the mucous membrane in this situation);

(4) The nodule on the under surface of the liver, thought at first to be a tumour, but which was probably a biliary concretion;

(5) The thickening in the roof of the bladder was most likely inflamed mucous and submucous coats;

(6) The solvent action of olive oil on the calculi which were left is of therapeutic interest.

*CASE II.—Cholecystotomy for gall-stones—Dense adhesions—Calculi in ducts treated by olive oil injections—Subsequent choledochotomy—Recovery.*

Miss H., aged 36, was sent to me in January, 1899, by Dr. J. R. Gibson, of Paisley, with a history of the occurrence of biliary colic at intervals during the preceding ten years.

The attacks of colic had become more frequent since June, 1898. Before this time they had occurred about once or twice a month, but latterly they have even been so frequent as once or twice a week, and ten days before my seeing the patient they had culminated in a very severe bout of pain, accompanied by vomiting. While vomiting, the pain had suddenly become very much worse. Although neither she nor her friends had ever observed any jaundice, Dr. Gibson noticed a distinct, though slight, icteric hue following the attack of pain. During the attacks he had also observed some distension of the gall-bladder.

Her digestive powers were not very good; she was often troubled with "acidity" in the stomach, accompanied by sour mouthfuls, and her bowels were inclined to be constipated.

On my seeing her she presented a well-nourished appearance, although by no means fat. There was tenderness complained of, and some resistance felt on palpating over the region of the gall-bladder, but this organ could not be felt, and percussion did not show any evidence of its enlargement.

Further examination elicited complaint of tenderness in the right iliac region, and as there was swelling and dulness here which could be traced up towards the liver, I was not quite clear that the severe attack last experienced might not be appendical in origin.

On the 28th January, 1898, assisted by Dr. E. A. Gibson, I opened the abdomen by a vertical incision in the right linea semilunaris, extending 4 inches down from the ninth costal cartilage. There was little fat, either subcutaneous or subperitoneal, in the abdominal wall. I found the transverse colon bound to the margin of the liver by dense adhesions, and a little further down the adhesions extended between the omentum and the abdominal wall.

I could not at first make out any appearance of the fundus of the gall-bladder, but on examining carefully in a line vertically downwards from the cartilage of the ninth rib I found, buried in connective tissue, a small rounded projection extending about 1 inch beyond the liver margin. This I opened tentatively without disturbing the adhesions, and it proved to be the fundus of the gall-bladder, the walls of which

were much thickened. As the bile flowed out it carried with it many small concretions of a dark green colour on to the sponges which I had packed round the bladder.<sup>1</sup> The finger, introduced into the viscus, felt through a fold of mucous membrane at the neck a large stone, but as manipulation proved unavailing, and as the patient was too weak to permit of the separating of the adhesions to expose the outer surface of the bladder and the ducts, it was left to be treated by the injection of olive oil.

A tube was inserted into the bladder, the fundus of which was attached by suture to the parietal peritoneum. The abdominal wall was then sutured in layers. Injections of olive oil were made through the tube into the bladder on the 1st, 3rd, 5th, 6th, and 8th February. The quantity injected was in each case about one fluid ounce, and its introduction was accompanied by considerable deep-seated pain, so that its employment was not persisted in. The tube was left out on the twelfth day after the operation, and the fistula closed rapidly thereafter.

She returned to Paisley at the end of February. The wound was healed, but she occasionally complained of slight pain in the region of the incision. This was thought to be due to the implication of some of the lower intercostal nerves in the scar, although, after being up for some time, she occasionally felt the pain as if situated more deeply.

Her dyspeptic symptoms were much improved.

Shortly after leaving the Home she again began to have attacks of the biliary colic, and these increased so much in severity and frequency that she agreed to a second operation. This was done in the Home in the middle of July, 1899. The old wound was carefully opened up, and the gall-bladder and colon were detached from the abdominal wall. It was then found that the previously dense adhesions between the colon and the liver had become very much altered in character, being more of the nature of thin drawn-out bands. These were divided, as well as numerous adhesions between the gall-bladder and the pyloric end of the stomach. In dividing the adhesions the finger was retained in the bladder as a guide to its walls. A mass was felt at the junction of the cystic and hepatic ducts, but it could not be forced back into the bladder. The abdominal incision was now increased by the addition of a transverse cut, and the cystic duct was thereafter incised longitudinally, and two large, blackish, soft stones

<sup>1</sup> These, which were mostly of the size of a split-pea, were forty-five in number.



were extracted. The larger of the two, about the size of a small walnut, was removed piecemeal, the smaller of the two entire. The wound in the duct was stitched, as also was that in the fundus of the bladder, but a gauze drain was laid in from the surface to the region of the duct incision. The abdominal wall was sutured in layers. There was more or less discharge of bile for fourteen days after the operation, but this ceased when the gauze drain was finally removed.

She went home well in four weeks, and has since remained so, with the exception of occasional turns of her old complaint, "acidity."

It should be mentioned that for some days after both operations she had retention of urine, requiring the use of the catheter.

The stones removed from the duct present the appearance of bilirubin-calcium. They are hard and brittle, and have a tendency to crack, and weigh (dry) 32 grains.<sup>1</sup>

I have noted in this case the following points:—

(1) The difficulty of locating the bladder owing to the extent and density of adhesions (these were probably associated with a rupture of the viscus during the severe attack of colic mentioned above);

(2) The inability to examine the ducts owing to her weak state on the table;

(3) The use of olive oil proving futile, even when injected directly against the calculi;<sup>2</sup>

(4) The altered appearance of the adhesions, thinning-out being noticed at the secondary operation, six months later than the primary one;

(5) Digestive troubles, doubtless due to the presence of adhesions;

(6) Attachment of the bladder to the parietal peritoneum. This was done to lessen the chances of the fistula becoming permanent, an event which might have happened had the viscus been sutured to the more superficial layers of the abdominal wall.

<sup>1</sup> I have named the stones in both cases after a comparison with the specimens in the Hunterian Museum in the University, a comparison which I was enabled to make through the kindness of my friend, Dr. J. H. Teacher, the under keeper.

<sup>2</sup> I have, since the above was written, tested the solubility of small fragments of the calculi in olive oil. The laminated cholesterin specimen was, after twenty-four hours' immersion in the oil, and without the application of heat, softened and crumbled easily. The bilirubin-calcium specimen, however, remained unaltered.

CASE OF PROFOUND APHASIA AND MENTAL CON-  
FUSION CURED BY TREPHINING AND EVACUATION  
OF A LARGE HÆMORRHAGIC CEREBRAL CYST.<sup>1</sup>

By JOHN LINDSAY STEVEN, M.D.,

AND

JAMES LUKE, M.B., C.M.

THE following case of aphasia is deserving of record, firstly, on account of the completeness of the recovery which followed the operation undertaken for its relief, and, secondly, because of the clear indications for operation which developed during its progress. On admission the aphasia was most profound, and was accompanied by an incomplete paralysis of the right arm, associated with a degree of rigidity of the fingers. The aphasia was not only motor, but sensory as well, the patient being clearly word-blind, if not also word-deaf. As regards the nature of the lesion giving rise to the speech-disorder there were no very certain indications, although, on the whole, the phenomena suggested the presence of hæmorrhage rather than any other lesion. Disease of the heart, disorder of the kidneys, and syphilis were excluded, and at first the patient was treated as suffering from the effects of cerebral hæmorrhage. The sudden and perfectly definite development of convulsive spasms, limited to the right side of the face, clearly indicated that an attempt to relieve the patient by trephining over the left motor area should be made. A large hæmorrhagic cyst situated in or over the left cerebral hemisphere was exposed and evacuated. A few days afterwards the patient recovered the power of speech and the use of his arm. He has remained well since, and, as you see to-night (15th December, 1899), there is no trace of his speech-defect remaining, and the power of his right arm is practically as good as ever. He is now on the point of leaving the infirmary for the convalescent home.

The following are the notes of the case as preserved in the Ward Journal, the clinical history having been recorded by Mr. Hugh M'Laren, M.B., C.M. :—

James M., æt. 38, a mason, was admitted to Ward 7 of the Glasgow Royal Infirmary on 4th September, 1899, under the

<sup>1</sup> Patient shown at a meeting of the Glasgow Medico-Chirurgical Society held on 15th December, 1899.

care of Dr. J. Lindsay Steven, suffering from aphasia and paralysis of the right arm.

The following history was obtained from his wife and sister:—

Until the onset of the present illness he had enjoyed good health. He suffered from sciatica six years ago, but he never had acute rheumatism or any specific fever. On 29th August, 1899, he went to his work in the morning in his usual health; when he returned home in the evening he said he was tired, and went to bed at once without taking any food. All night he was very restless, getting out of bed several times during the night. On the morning of the 30th, his wife noticed that she was unable to make out what he was saying, and also that he was paralysed on the right side. He has been more or less confined to bed since the onset of the illness. He sleeps fairly well, but the appetite is poor, and the bowels are constipated.

*Family history.*—His father died (æ. 45) of jaundice, after twelve months' illness. His mother is alive and well. All his brothers and sisters (eight) are alive and well. He has had four children; three are alive and well, one died of inflammation of the brain after seven days' illness.

*Condition on admission.*—He has a healthy and well-nourished appearance. The face is flushed; the pupils are equal, and respond to light and in accommodation. There is a slight droop of right upper eyelid. The tongue is coated with a white fur, and is protruded in the middle line. No facial paralysis is present. He is somewhat dull mentally. Usually he does not appear to understand what is said to him, but occasionally he does do what he is asked to do. During the examination he was unable to utter a single syllable.

Pulse numbers 64; it is of fair volume and tension, and regular in force and rhythm. Little or no atheroma of the radial arteries is present. Respirations number 28, and are regular.

*Chest.*—The apex beat is a punctuate impulse in the fourth interspace,  $3\frac{1}{4}$  inches to the left of the middle line. The upper margin of the cardiac dulness is at the upper edge of the fourth rib; the right is an inch and a half to the left of the middle line; and the left is  $3\frac{1}{2}$  inches to the left of the middle line. The cardiac sounds are pure.

The percussion note over both lungs is resonant, and the respiratory murmur is accompanied by a few coarse râles. The upper margin of the hepatic dulness cuts the sixth rib in the mid-clavicular line, and in that line measures 4 inches.

The organs of the abdomen present normal characters.

There is well-marked loss of power in the right upper

extremity. He can perform slight flexion and extension at the elbow-joint, and he can move the shoulder a little; there is well-marked wrist-drop, and the fingers are semiflexed and rigid.

There is no loss of power in the lower extremities. The knee-jerks are well marked on both sides, and ankle clonus is present on the right side. The plantar reflexes are well marked on each side. The cremasteric, abdominal, and epigastric reflexes are not very active. He has lost control of the sphincters to a considerable extent, the urine, and occasionally the fæces, being voided involuntarily.

The urine is amber coloured; specific gravity, 1022; no albumen; no sugar; phosphates are thrown down on boiling.

On 6th September, 1899, I (J. L. S.) entered the following note in the Ward Journal:—This morning the patient is considerably more confused and confusing than when Dr. Lindsay Steven saw him yesterday. Aphasia seems to be very complete, although it is somewhat difficult to differentiate the precise character and classification of the speech disorder. The nurses have been quite unable so far to make out anything that he says, although it is apparently obvious that he frequently attempts to give utterance to his thoughts. The expression of his face is, on the whole, very intelligent, and it seems as if he fully perceived and appreciated his surroundings. He sleeps but little at night. He sometimes says "yes" and "no," but that only when he has been considerably stirred up. As a general rule, he replies to all questions only by a vague smile, from which it is impossible to be sure whether he has understood the question or not. Yesterday (5th September), when asked to put out his tongue, he did so; but to-day he does not, the nearest attempt being a slight opening of his mouth. When asked to whistle he makes no attempt to do so, but says "yes" somewhat vigorously when asked if he can whistle. Yesterday he spontaneously whistled on the nurse to attract her attention. It cannot be said that he is not word-blind. When the two sentences, "Put out your tongue" and "Shut your eyes," are plainly printed, he looks at them a long time without any attempt to fulfil the command, although, from the expression of the face after looking at the words, it seems as if he were attempting to indicate that he understood what was printed on the paper. The fact, however, of his making no attempt to do what is asked renders this doubtful. When he is asked to read aloud the sentence "Shut your eyes," he begins counting "1, 2, 3." At another time he makes sounds as if repeating letters, but only the letter "N," which

does not occur in the sentence, is made out. When given a book upside down, he turns it right before attempting to read it, but he cannot apparently pronounce any of the words he sees. When his own name, made up with block letters, is presented to him upside down, he makes no effort to rectify the error, and when the word is put before him in its proper position, there is no indication that he interprets it aright. At this point he is suddenly and sharply asked to put out his tongue, and he does so at once; he is then asked to sit up, and makes at once a vigorous attempt to do so. He is then sharply asked to shut his eyes, but will not, even when Dr. Lindsay Steven shuts his own eyes to show him. When commanded to hold up his left hand, he makes no attempt to do so; but it is observed that with these last two commands (spoken loudly to him) he makes vigorous attempts at conversation, the most of the sounds being inarticulate, but among them "I can't," or "I wont," is distinctly recognised. The droop in the right upper lid is, perhaps, less pronounced to-day, but a right-sided incomplete facial palsy, though slight, is quite unmistakable, especially when he smiles, as he frequently does in a knowing manner during the attempts at conversation.

Mucus tends to collect in the right angle of the mouth and in the right eye. He moves the right arm slowly when asked to do so, but there is a quite evident tendency to rigidity. This is specially marked in the fingers, which are usually held flexed on the palm: as yet there is no great difficulty in overcoming this rigidity. A tap on the extensor muscle is followed by a well-marked jerk of the hand. He draws up both legs easily. The patellar reflex is exaggerated on the right side, and on this side there is well-marked ankle clonus.

*25th September, 1899 (J. L. S.).*—At 11.15 A.M. to-day, just as Dr. Lindsay Steven is commencing the ward visit, a twitching of the right side of the face is observed in this case, of a somewhat massive character. The right eye is spasmodically opened and closed. The right angle of the mouth is drawn backwards and slightly upwards; there is slight spasmodic jerking of the right naso-labial muscles. At the same time the root of the tongue is jerked backwards and downwards, the anterior portion of it being thus knocked against the palate, whilst the floor of the mouth is jerked downwards behind the chin. The whole series of movements affecting the eye, the right labial angle, and the root of the tongue present a rhythmical character.

The right arm and right leg do not partake at all in the spasm. The convulsion terminates absolutely abruptly after

having lasted about seven minutes, the face becoming quite quiescent and the expression intelligent in a moment's time. So far as can be judged from his appearance, he seems to be conscious during a spasm, but the aphasic condition renders it impossible to obtain any corroborative evidence of this from the patient himself.

In addition to the facial convulsion described above, at least seven other seizures fall to be recorded. The footnote gives the nurse's detailed account of these and subsequent fits while under observation in the medical ward.<sup>1</sup>

After improving considerably as regards speech and general health, the patient relapsed somewhat on the 17th and 18th September. His aphasia returned as severely as ever, and he became intellectually dull and somewhat lethargic. For a few days before the relapse he had regained completely the control of his sphincters, but since the 18th this again has been considerably lost.

The right hand, as regards its loss of power, is not materially worse; but it has been noticed, with the onset of the relapse just described, that there has been a distinct tendency to dragging of right leg.

It is worthy of note that the relapse just described has been accompanied by a distinctly subfebrile temperature of a remitting type, and on the 22nd and 23rd inst. the temperature was definitely high, remaining about 101° night and morning.

<sup>1</sup> *Note of fits.*—22nd September, 1899 (2.10 P.M.).—Short spasm of right side of face.

24th September, 1899 (2.50 P.M.).—Fit lasting five minutes; twitching confined to right side of face; bit his tongue.

5 P.M.—Patient had a fit lasting about a minute; convulsion confined to right side of face; mouth drawn upwards; pupils slightly dilated, responding to light. Patient seemed conscious, put out his tongue when asked to do so immediately after the twitching ceased. Foamed slightly at mouth; was not drowsy after seizure.

6.5 P.M.—Fit lasting two and a half minutes; twitchings confined to face and right hand, lower jaw working up and down as if he were chewing. Pupils equal, dilated, and responding to light; face flushed, foamed at the mouth, did not bite his tongue, could be roused easily after fit ceased.

25th September (12.30 P.M.).—Fit lasting two minutes; twitching confined to right side of face.

5.30 P.M.—Fit lasting four minutes, similar to the others noted—bit his tongue, tried to put out his tongue when asked to do so. While twitchings were going on, foamed at the mouth.

9.20 P.M.—Twitchings upwards of right side of face only, lasting about two and a half minutes; did not bite his tongue; no foaming at the mouth; pupils slightly dilated, equal, and react slowly to light.

Before the relapse the temperature had been distinctly subnormal for at least ten days.

The patient has always had a ruddy complexion, but latterly the cheeks and lips have been distinctly more flushed.

The urine is highly concentrated, of a deep orange colour, but otherwise presents no abnormality, containing neither sugar nor albumen. It is impossible to be sure whether he suffers from pain in the head, but occasionally his face has been noticed to have a drawn expression, and he often puts his left hand over the left forehead and temple.

To-day it is almost certain that he is word-blind. The plainest command written or printed excites no obedience. "Do what this paper asks you to do—shut your eyes" is shown to him in all ways. After looking at it for a long time he makes some vague motions of his left hand, but from first to last no attempt to shut his eyes.

[*Note by Dr. J. Lindsay Steven.*—On consideration of all the phenomena, Dr. Lindsay Steven arrived at the conclusion that the lesion involved a wide area of the surface of the left cerebral hemisphere. The presence of the word-blindness indicated that the lesion was not confined to the neighbourhood of Broca's lobe. The rigidity of the fingers of the right hand suggested a cortical situation of the lesion, and the development of Jacksonian epilepsy left no doubt on the point. There was no longer any doubt as to the propriety of operation, and, after consultation with Mr. James Luke, acting for Mr. J. H. Pringle, the patient was transferred to Mr. Pringle's wards, where Mr. Luke operated on 30th September, 1899. Owing to the large size of the cavity of the cyst the disc of bone was not replaced, and the cavity was allowed to fill up by granulation, which it has done very satisfactorily.]

Since the time of dismissal from the infirmary the patient has been kept under observation, and the following notes give an account of his condition up to July, 1900. It will be seen from these notes that, during his residence in Ward 7 before the operation, he must have been in a very confused state of mind, not knowing properly where he was, and possibly also not interpreting aright the words which were spoken to him. Although he imagined that he was back at school learning his letters, it is remarkable that he was able to recognise Dr. Lindsay Steven the first time he saw him after the operation. He is still, however (July, 1900), when questioned on the matter, perfectly definite in his statement that he had no

proper idea of where he was while in the medical ward, and that he had a confused idea that the physicians in attendance were schoolmasters.

[The following are the notes of the last two examinations of the patient :—

*28th April, 1900* (J. L. S.).—The patient reports himself to-day after having been three weeks at Bearsden Convalescent Home. Since leaving the surgical ward on 22nd December last, he has remained quite well as regards his speech, and the power of his right arm and leg. To-day, with the dynamometer, he registers 38 k. with the right and 39 k. with the left hand. He says, however, that he still experiences a slight stiffness when he closes the right fist firmly.

About two months ago he caught cold, and was confined to bed with a cough for eight or nine days, but with this exception has no other complaint to make. He says that during the whole time he was in Ward 7 he had no proper consciousness of where he was, or of whom the people were round about him. He has a vague remembrance of thinking that he was at school learning lessons, so that in all probability he was not only word-blind, but word-deaf, and it is now extremely doubtful whether he ever really understood anything that was said to him or written to him while he was in Ward 7.

*7th July, 1900.*—Patient reported himself to-day complaining of cough, with a slight spit, which, he says, prevents him sleeping on his left side. After his return from Bearsden he worked for about three weeks as a canvasser, but gave it up, as he found the excessive walking very tiresome. The pain in the region of the tendo Achillis and the swelling of the legs, which troubled him while at similar employment just before he went to Bearsden home, are not now troublesome. He remained at home a week or so, and a fortnight ago resumed his former employment as a mason. This work, though tiring him more, seems to suit him better.

Pain in the left side of the chest in the region of the heart has troubled him for the last fortnight, but is only present at night. Rest always relieves the pain. While canvassing, pain was troublesome in the left lumbar region. He has no headaches. Since leaving hospital patient has been almost teetotal, as twice when he took "a half" of brandy and soda he felt his head light.

Lungs and heart are normal to examination. With the dynamometer patient registers 39 k. with the left and 38 k. with the right hand.]



CURED SPINA BIFIDA, OR SACRAL TERATOMA?<sup>1</sup>

By JOHN LINDSAY, M.A., M.B.

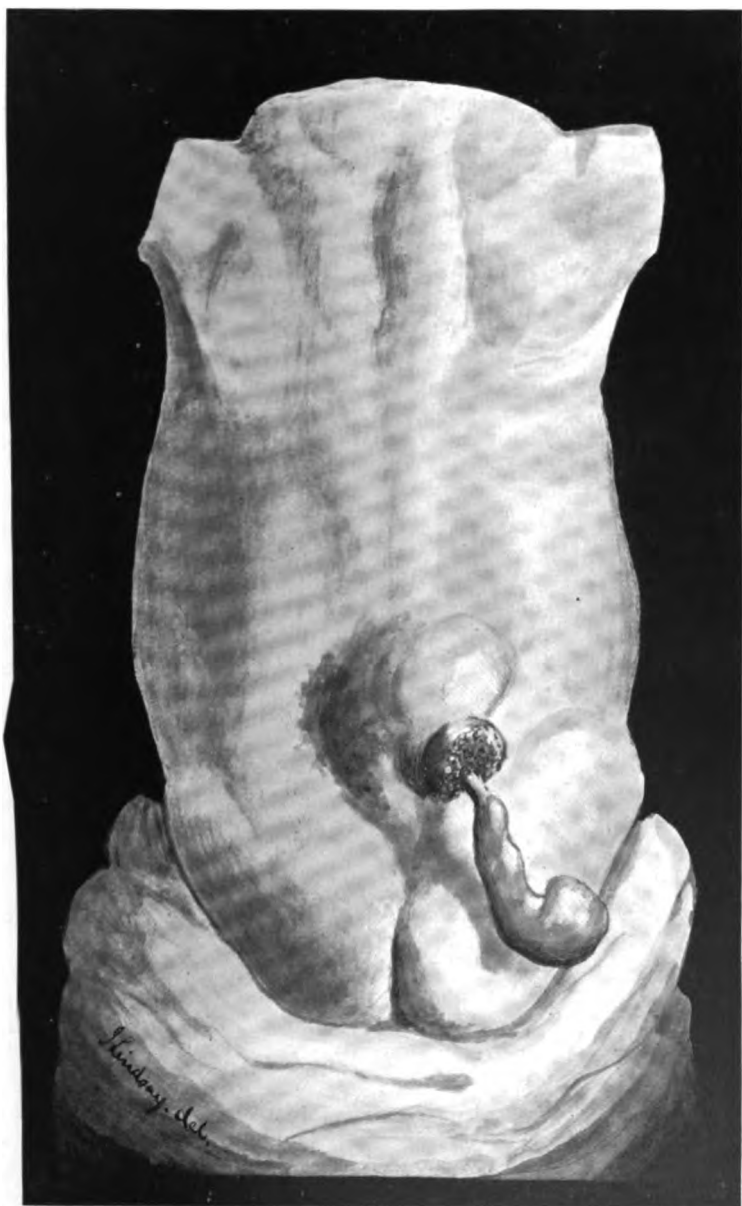
I BRING this case before you for the second time after an interval of five and a half years. Although it is one of exceptional interest, I have hitherto refrained from publishing any description of it, on the chance that an operation might be required, and the diagnosis be thereby established. But, except for an attack of measles and one of whooping-cough, the child has had no illness, and at the present moment she is the picture of health. There have been no symptoms referable to the tumour, and no indication whatever for surgical interference, nor is there any likelihood of such measures ever being called for. So I have decided to put the case on record now with all the doubts attaching to it.

The child was born on 24th June, 1894, and I brought her before you at the earliest possible opportunity—the November meeting of the same year. This model, from which the drawing has been made, gives a fair and accurate representation of the appearance at birth. I had failed to get a cast owing to the restlessness of the little one, and I made the model in clay with my subject before me lying in the nurse's lap.

Before describing the condition, I should say that the child is the fifth in a family of six children, none of the others showing any anomaly. The parents are healthy, of the artisan class, sober and thrifty, and without any constitutional taint. The pregnancy was without incident, except that the mother slipped and fell heavily on the pavement six weeks before her confinement. The accident, however, had no evident effect on the uterus or its contents, and labour was easy with a cranial presentation.

Over the lower lumbar and upper sacral regions, lying chiefly to the right of the middle line, there was a considerable swelling of an oval shape, the skin covering of which was normal in character, except for a capillary nævus on its left lateral surface. The tumour, to palpation, appeared to consist of fat, and of fat only. From near its lower end there projected a button-like protuberance, with a constricted neck and enlarged cup-shaped head. The hollow of the cup was filled with what looked like granulations, but their surface was dry

<sup>1</sup> Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 25th April, 1900.



Spina bifida undergoing spontaneous cure—or sacral teratoma?



and glazed; and from the centre of this bright red area there hung down an appendage about 3 inches long, slender at its origin, but widening out to a bulbous extremity. In colour and consistence it was exactly like the umbilical cord, and seemed to consist of a gelatinous substance in a thin investment. An elastic sac, tensely filled with fluid, gives much the same impression to the touch, but no fluctuation was detected.

The appendage was dressed with a piece of linen in the same manner as the stump of the funis. Next morning it had shrivelled, and eventually it dropped off about the same time as the remains of the cord—that is, about the fourth or fifth day.

The opinion I formed in regard to the case, and the diagnosis with which I presented it to the Society, was this:—There had been a spinal meningocele; the skin over it had ruptured, and, the edges of the tear granulating, had cut off the extruded portion of the sac. Although I was not aware of any occurrence of this kind having been recorded, I saw no reason to revise the diagnosis until quite recently, when I came across a report of what appears to have been a very similar case. This is to be found in the *Transactions of the Pathological Society of London* for the year 1888, and I quote the following passages from the statement of Mr. Edinund Owen, who presented the case:—

“In the exact centre of the surface of the swelling is an umbilication a quarter of an inch in depth. Half way between this dimple and the lower border of the swelling, but slightly to the left of the middle line, is an appendage (inclining to the left) 2 inches in length.

“The base of the appendage is constricted; the greatest circumference is one third of an inch from the point of attachment to the general swelling. On the left side of the appendage is a second small excrescence about a quarter of an inch in length.

“The swelling and appendage apparently consisted entirely of soft elements, and the consistence and appearance are perhaps more likely Wharton’s tissue, as found in the umbilical cord, than like fat. There is no fluctuation. No malformation of the spinal column can be definitely made out, but there is a very ill defined vertical ridge deep down beneath the central umbilication, which, together with the umbilication, is suggestive of spina bifida.

“As regards the nature of the rounded swelling and the appendage, I will suggest that the former is not unlikely the result of a spina bifida, whilst the appendage may be, and

possibly the rounded tumour as well, the result of a very imperfect attempt to produce a double monster. The sacral region is by no means an infrequent site for the attachment of a fairly developed or a rudimentary foetus."

The reading of this report has prompted me to reconsider the facts in my own case. I think there can be little doubt that this infant was the subject of spina bifida. Although no deformity of the spine can be detected by palpation, the frequency of the condition in the lumbo-sacral region, and the presence of the large nævus, make its occurrence in this case highly probable. Add the fact that at the present time a cavity, apparently containing a little fluid, can be felt in the firmer mass of the tumour, and the diagnosis of spina bifida is fairly secure. Assuming, then, that there was a meningocele, the question is, did it undergo spontaneous cure in the manner suggested, by rupture of the skin and constriction of the sac?

As against this having happened, these objections may be raised. In the first place, the point of attachment of the appendage did not look quite like a granulating wound. As has been stated, the surface was dry and glazed, and might be better described as a reddened, papillary condition of the skin; and at the present time there is no such scar as one would expect after the healing of a tear of the kind supposed. Instead of this there is a venous nævus about equal in area to a half-penny piece, with a linear depression running through it, the original protuberance having disappeared.

In the second place, had there been an extrusion of a meningocele, and subsequent slow compression of its neck, one would have expected to find the sac congested and œdematous, since the feeble return current of blood would have been more affected by the compression than the stronger outgoing stream. But there was no congestion; the appendage was pale blue, almost white, in colour.

Lastly, to judge from the subsequent behaviour of the part, the vascular supply must have been cut off completely by the time of birth; yet there was no evidence of necrosis; the tissue was fresh and living when the child was born.

If the appendage was not a hernia of the spinal membranes, what then was it? It is a bold thing to suggest that it may have been another umbilical cord, yet the possibility of its having been this must be taken into consideration. The admitted presence of spina bifida does not exclude teratoma: on the contrary, it makes teratoma more likely, since their association is of very frequent occurrence. Now, a teratoma in this region may arise in different ways. The posterior

portion of a single blastoderm may double. If the reduplicated part attains to full development, a monster of the variety dipygus is produced, one with three or four posterior limbs. Should, however, the superadded portion fail to grow, it remains as a tumour attached to the pelvis of the autosite. Such a tumour may contain a coil of bowel, but it is inconceivable that this bowel should be thrust through the skin, and appear as the anomalous appendage in the present case; and there is no possibility of an independent umbilical cord in connection with a parasite of this origin.

But a sacral teratoma may also arise through the failure in development of one of pygopagus twins. In this variety of double monster the embryos are set back to back, and attached to each other only in the pelvic region, each having its own umbilical cord. If one is arrested in development at an early stage, it becomes overwhelmed by the growing tissues of the survivor, and little trace of it may remain. The question then arises, could the umbilical cord of the absorbed embryo continue to grow after the body which it served had wholly or partially disappeared in the substance of the other? I think this may as readily happen as that which we know does happen, namely, the continued growth of a single limb of such a parasite. And particular circumstances in the formation of pygopagus twins specially favour the persistence of the second cord. In these, as in other single-ovum twins, there may be anastomosis of the placental vessels of the two embryos. So long as the twins are of equal vigour, no result follows that anastomosis; but if there is great disparity between them in this respect, the more powerful heart impedes the action of the weaker one, and ultimately reverses the direction of the blood current through it. Acardiac monsters are believed to originate in this way. These often almost shapeless masses never occur except in twin pregnancies. But acardiacus in connection with pygopagus twins is sacral teratoma.

Of great importance is the fact that in pygopagi there is anastomosis of the pelvic vessels. Because of this, and the placental anastomosis, a kind of subsidiary circulation may be established from the heart of the autosite, through the placenta, through the cord of the parasite, and through the pelvic vessels back to the starting-point. The existence of a current of blood through it in this way would probably be sufficient to determine the continuance of the second funis until something intervened to stop the stream, such as the retrograde changes in the placenta that take place in the later

weeks of pregnancy, or some such accident as happened to the mother of this child. It is presumed in this case that, after growing for a time, the funis became separated from the placenta. Nor is this an unwarrantable presumption, for spontaneous separation of the cord does occur. I would point as a precedent to a case illustrated in the article on "Teratology" in Todd's *Cyclopædia of Anatomy*, where there is figured an acephalic monstrosity consisting only of pelvis and legs with a piece of umbilical cord attached, the free end of which is rounded off in a manner similar to the head of the appendage here.

All this, of course, is mere speculation; a microscopical examination of the doubtful part would have been worth it all; but the amputation of it was not to be done without consideration; and by the following morning it was so dried and shrivelled as to be useless for histological purposes.

I have set out what I consider the possibilities of the case, but the facts are insufficient for arriving at any conclusion. If a decision were to be given on what one thinks are the probabilities, then I should say that this is a case of cured spina bifida; but if I were to decide upon the evidence of my senses of touch and vision, I would be bound to assert that the curious appendage was an umbilical cord.

## NOTES ON A CASE OF DOUBLE UTERUS (UTERUS SEPTUS) AND DOUBLE VAGINA.

By DAVID TINDAL, M.D., F.F.P.S.G.,  
Physician, Glasgow Samaritan Hospital for Women.

THE following case may be of interest on account of its rarity:—

The patient, aged 23, was admitted to the Glasgow Samaritan Hospital for Women on 23rd May, 1900, on account of severe pain in the left side (iliac region) of nearly two years' duration. She was married two years ago, and had a child about fifteen months later. The child appeared to be healthy at birth, but died ten months afterwards of meningitis.

*Menstrual history.*—Patient began to menstruate at 12 years of age. She was regular every four weeks; seven to

eight days ill; quantity variable; bright red in colour; no clots; no odour; pain in hypogastric and sacral regions coming on three days before, and lasting during the flow. Has occasional attacks of vomiting during the period. Family history is good.

When three and a half months pregnant, she was seized with severe pain in the lower part of the abdomen, but chiefly in the left iliac region. She was treated for a threatened abortion, and remained in bed for a month. At no time, however, had she any discharge. The pain returned three months later, and continued more or less till the birth of the child. At no time during the course of the pregnancy was there any indication of menstruation. Labour was very difficult and prolonged, lasting five days. Liquor amnii came away on the second and fourth days. She was delivered by forceps under chloroform. The lochial discharge was at first very copious, and lasted for sixteen weeks. To arrest it, she had a variety of medicines, as well as hot douches. After the cessation of the lochial discharge, menstruation occurred several times at intervals of six weeks or two months. In the early part of this year, it came on every fortnight, and the last two periods have occurred at intervals of two weeks.

Leucorrhœa has been present during the intermenstrual period, and has usually been worse after the cessation of each period. The pain, of which she complains, is worse on the left side; is bearing-down in character; is relieved by rest, but is much worse after exertion and during menstruation. She has had a feeling of weight in the back and the lower part of the abdomen since three months after the child was born.

Micturition is frequent, and patient has required to get up two or three times every night. Distension of the bladder causes pain. She has had retention of urine lasting for a day, but the catheter has not been required. Defæcation is regular, and the stools are normal in character. In April of this year patient was curetted, with a view to the relief of the pain, but without deriving any benefit.

*Examination after admission.*—Patient is well developed, but very anæmic; mucous membranes are pale; pupils dilated; tongue clean; teeth good; pulse of low tension, regular, 70 per minute; temperature, 98·8° F. Breasts normal in appearance; areolæ round nipples; left breast tender. Abdomen normal, with the exception of tenderness in the left iliac



region on pressure. Heart, first sound muffled. Lungs healthy. Urine normal.

*Pelvic examination under chloroform.*—External genitals normal, with the exception that the labia minora are elongated. Perineum slightly lacerated. Vaginal walls rugose. There is a fleshy septum to the left of the middle line, dividing the vagina into two portions. This septum is not complete, but is perforated, the perforation being about the size of a crown piece. It is doubtful whether this was its condition originally, or whether the perforation occurred during the process of delivery; in any case there may be said to be two vaginæ. The right vaginal orifice is gaping unduly, and its entire cavity can be seen very well without it being necessary to separate the parts or make use of the speculum. Inspection is rendered much more satisfactory on account of the rays of the sun falling into it.

The portio vaginalis points downwards, backwards, and to the right. It is of normal size, and there is a slight bilateral laceration. There is no erosion; the sound passes  $2\frac{1}{2}$  inches, and points slightly towards the left of the middle line.

The left vaginal orifice is about half the size of the right, but admits two fingers easily. The vaginal walls are much smoother than those of the right vagina. The portio vaginalis is also smaller, points downwards, forwards, and to the left. Sound passes  $2\frac{1}{2}$  inches upwards to the middle line.

There are two uterine cavities, distinct the one from the other, for, on passing a sound into each, there does not seem to be any communication between the two. Bimanually, only one uterus can be felt—at all events it is impossible to make out more than one, or where the one merges into the other. It is freely movable and in normal position, and examination of the uterine body would not lead one to suppose that there is more than one uterine cavity.

Right ovary is of normal size, probably a little prolapsed. Left ovary, also normal, but can only be felt *per rectum*. Left tube slightly thickened. There is no tumour mass felt bimanually, nor undue bulging of uterine body, such as would lead one to suppose the presence of retained fluids. While being kept under observation, menstruation occurred, and, on careful examination, it was found that the menstrual fluid came from the right cervical canal; there was no change in the left except some slight congestion round the os externum. The period lasted six days, and seemed normal in every other respect, with the exception of the severe pain. After this period ceased, the right cervix was dilated up to No. 10 Hegar,

and the right uterine cavity was curetted, very little endometrium being removed. The left was next dilated up to No. 7 Hegar.

There was considerable stenosis of both cervixes, but more especially of the left. The dilatation was kept up by subsequent intra-uterine douching for more than a week. Patient made a good recovery, and, when she was dismissed, was free from pain.

## REPORT ON RELAPSING FEVER AND OTHER AILMENTS IN H.M. COMMON PRISON, BOMBAY, FOR THE YEAR 1899.

BY GEORGE WATERS, L.R.C.P. EDIN., L.R.C.S. EDIN.,  
Lieutenant-Colonel, Indian Medical Service; in Medical Charge,  
H.M. Common Prison, Bombay.

IN order to show at a glance the prevalence of sickness and mortality in this jail throughout the year 1899, I subjoin the following statement in tabular form:—

	Jan.	Feb.	Mar.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.
Attacks, . .	10	3	5	2	6	6	6	4	8	54	79	133
Deaths, . .	...	1	1	...	1	...	3	3	1	6	7	20
Population, .	358	344	366	376	378	387	346	374	431	354	397	368

2. The first six months of the year under report show a remarkably good state of health among the jail inmates. Three deaths in a population of say 370 give but the death-rate of a sanitarium, or something like 16 in the 1,000. These three deaths were from ordinary causes, and it is worthy of remark that this low death-rate within the jail was concurrent with a mortality of something like 190 in the 1,000 among the surrounding population, plague being then at work among the people with an unprecedented severity. In the first week of July the state of health in H.M. Common Prison suddenly changed from a condition resembling a European sanitarium to one of increasing mortality. The plague was at that

moment in Bombay at its minimum for the year, and I did not suspect it as being at work among the prisoners. Still cases occurred, running on to a fatal termination in a few days, the only important symptom being fever; and as small glandular swellings in the groin was a feature common to a large proportion of them, I was, much against my will, driven to declare them plague. I was, however, still in a state of perplexity on the point, as I had never seen plague occur under the circumstances in which the prisoners were placed. Still I could see no other grounds for the mortality, and made no attempt to disguise the cause of death, notwithstanding the fact that this admission seemed strongly to challenge the validity of the doctrine that dryness of environment is the best plague preventive. In this regard there was still the house of correction, with its wonderful absence of anything beyond the mortality of a sanitarium to support me in holding to the doctrine in question.

As soon as I could send cases to the Arthur Road Hospital I did so, informing Dr. Chokey of my doubts; and there Dr. Marsh, who had been for some time employed here on bacteriological research, found the spirillum of relapsing fever in most of the cases, and the relapse came in due time to confirm the diagnosis in almost all the others. I had meanwhile asked Major Bannerman, acting principal of the Research Laboratory, to inoculate the prisoners, and this was done on the 12th October, and ever since fresh arrivals have been inoculated by myself. At first all the convicts consented to the operation, but soon many of them, finding that inoculation was not compulsory, declined to have it done; and now I should say that only from 10 to 15 per cent of the prisoners are inoculated by me, but not a few of them have already had the operation performed outside, and thus at least 30 per cent or more of the jail inmates are reasonably protected from plague by prophylactic means.

3. Whilst I was under the misapprehension that plague was at work in the common jail, a few of the deaths were declared to be from that ailment. This, however, has since been corrected in the returns, and, with few exceptions of death from ordinary causes, all the cases ending fatally in the last six months have been caused by relapsing fever, and I may add that the great majority of these cases have been confirmed as such by bacteriological examination either by Dr. Marsh or Captain Lamb, I.M.S. There was then no microscope at the jail, and I took one I had recently obtained for the house

of correction to the common jail, and was able to identify not a few of the cases, but the  $\frac{1}{2}$  object glass with which this microscope is furnished is too low a power for this sort of work. Dr. Marsh, with a  $\frac{1}{12}$  oil immersion object glass, had no difficulty in identifying almost all the cases with a rise of temperature as relapsing fever, and I repeat that the few which did not yield the organism to microscopic observation gave confirmation of their nature by relapse.

4. In connection with this visitation of relapsing fever, the circumstance is singular and fraught with suggestion that the female prisoners, numbering from 20 to 30, have not amongst them a single case of relapsing fever, and no mortality whatever. This altogether precludes the possibility of the infection of the jail from outside sources.

5. Since the 1st of July the whole mortality may be considered due to relapsing fever, with the exception of three cases—one of valvular disease of heart, a case of tetanus, and one of general debility.

6. I have said that I mistook the cases of relapsing fever for plague at first owing to their having swelling of the glands in the groin. This is a feature of relapsing fever that has hitherto not received due attention. The other symptoms, too, of relapsing fever in a first attack closely resemble plague, there being delirium, high fever, jaundice, epistaxis, and not infrequently pneumonia in both diseases. There are, of course, several differentiating factors besides the respective organisms, but that to which I wish specially to draw attention is the glandular enlargement in the groin. In plague there are only a few glands swollen, if more than one; in relapsing fever the enlarged glands present a beadlike chain along the groin, embracing its entire length, and the enlargement is uniform and slight in extent, whereas in plague the enlargement is considerable, approaching, and in many cases exceeding, the size of an almond.

7. Early in October the superintendent eagerly desired to whitewash the hard labour yard, including the floor of the space involved. I consented reluctantly, as I did not anticipate benefit from so much damping of the surface; but I had no idea that the mere act of whitewashing would prove so disastrous as it seemed to do (*vide* the state of deaths). In this respect, too, the visitation of relapsing fever behaved

exactly like plague, only the relapsing fever persisted much longer than plague after the dampness caused by the limewash had been removed by the sun.

8. The relapsing fever attacks being confined in the main to comparatively recent arrivals in the jail, I associated the "under trial" side of the prison with the cause of the disease; and, finding that the whitewashing of the "hard labour" yard had only a disastrous effect, I resolved to see how far the "under trial" side of the jail might be answerable for the outbreak, and so on the 9th of December I had all the "under trial" prisoners removed to the "hard labour" yard. Since then there had been a marked subsidence of the disease. Altogether, only seven cases of relapsing fever have occurred among those admitted in the interval between that date and the end of the month and year. Of these, five were obviously imported cases, as they were sick on admission to jail, and were almost at once admitted to hospital. It is, of course, well known that relapsing fever had by this time gained considerable prevalence among the outside surrounding population. Of the remaining two cases, one was received in jail on the 15th and the other on the 16th of December, and the two were admitted to hospital on the 25th and 27th respectively of that same month. Now these two cases, as arising within the jail, would be a strangely isolated occurrence, considering that ten or twelve persons are admitted daily—that is to say, two persons smitten with relapsing fever out of seventy and odd persons admitted to jail during the interval? No. In their case the interval between admission and attack was ten and eleven days respectively, and such intervals are well within the outside limits of the period of incubation of relapsing fever, this period having been known to reach sixteen days. Practically, then, we have not had an indigenous case (so to speak) in the jail since the 9th inst., and, so far as the "hard labour" yard is concerned, the outbreak of relapsing fever has been arrested. As to when the "under trial" yard can with safety be reoccupied, that is a difficult question to answer. Meanwhile, I should say, there is no unusual overcrowding, as the "under trial" prisoners are accommodated at night in the "hard labour" sheds, which are ample, and not unsuitable for the purpose. I am inclined to think that the prolonged disuse of the "under trial" yard, and the free force of the sun's rays, will be the means best suited for the eradication of the poison of relapsing fever from the common jail, and to this we should trust. The ensuing monsoon will,

I think, completely remove the mischief. We have seen an intense aggravation of the epidemic by the use of limewash; and a potent disinfectant like quicklime and water failing, I shrink from recommending the use of any other disinfectant applied with moisture.

9. As only seven persons have been admitted to hospital since the 9th December among fresh arrivals, and as we see that the disease has thus shown marked abatement, I recommend that the prisoners should stand fast, at least pending the observation and experience of another month.

10. I need hardly say that the question of what best to do for the arrest of the disease was constantly in my mind, and the recommendation of the removal of the prisoners to camp was the subject of earnest consideration. I felt that, under any circumstances, the removal of the prisoners *en masse* would be attended with an increase of mortality, altogether apart from the many other difficulties with which the situation would thus be surrounded; and as I did not despair of getting at the bottom of the trouble, I held on to my endeavour to stop the disease without putting Government to the expense, loss of life, and inconvenience which the closure of the Oomarcarry Jail would imply, and I think I have now got at least on the track which leads to success, and I therefore adhere to my recommendation that things should remain as they are—that is, as I have placed them.

*P.S.*—I find I have not completely explained the exemption of the female prisoners from relapsing fever. They are housed, day and night, in the upper storeys of two separate blocks, and seldom walk in the jail yards, and so are not exposed to the poison, which would appear to keep close to the ground. That they have not imported the disease from outside is clear from their continued exemption from attack.

(No. 15 of 1900.)

H.M. COMMON PRISON,  
BOMBAY, 16th March, 1900.

*From the Medical Officer in Charge, H.M. Common Prison, Bombay.*

*To the Inspector-General of Prisons, Bombay.*

SIR,—As the outbreak of relapsing fever on which I reported at the close of the year 1899 has now happily been

altogether brought to a conclusion, I have the honour to send you this additional information, which may be considered the completion of my report on that subject:—

2. In January last we had nine deaths from relapsing fever, and nine in February. The last case occurred on the 5th March, since which there has been no occurrence of relapsing fever in H.M. Common Prison; and, as the middle of March has now been reached, we may, I think, fairly consider that the disease has terminated within the jail.

3. You are aware that relapsing fever has been entirely confined to the Common Prison, not a trace of the disease having appeared in the sister institution, H.M. House of Correction; and you will doubtless remember that, in my report on this subject furnished on the completion of the year 1899, I said I believed the cause of this outbreak was within the prison. Of this fact I am now well assured, and warrant for this assurance will be found in what I am about to say; but I would specially beg you not to ascribe blame in this regard to the superintendent, as that gentleman was altogether ignorant of the consequence of his act, as, indeed, was I myself till circumstances opened my eyes. Early in July last I noticed with alarm that holes were being dug in the garden immediately behind the jail hospital, and old cow dung deposited in the pits thus made. I at once remonstrated on the score of the health of the hospital inmates, and the holes were filled in without delay, but the cow dung was not removed. The plantain trees, too, which had been for years in this patch of ground, were at once cut down. This was in a sense more than I asked for, as I had not previously noticed anything in the health of the sick or the prisoners generally to suggest that the plantains were injurious. I merely mention this to show you that Mr. Mackenzie was anxious to meet my views even at a sacrifice. Still the mortality went on, and when the hospital attendant took ill and died, he having for a considerable period never been outside the building, I felt that his death was due to something within the hospital precincts, and I forthwith began to make a very close inspection of the premises. Proceeding to the storerooms on the ground floor, I found some cartloads of garden earth in one room, and about half a cartload of old cow dung in another. The cow dung was at my request removed to a part of the jail remote from the prisoners. The mortality still continuing, I had the ground well searched, and I think all the dung was

now discovered. As the superintendent complained of the loss to which the carrying out of my advice was subjecting him, I consented to his storing the manure in the pit dug in the platform under the old gallows, outside the prison, at the entrance to the civil side of the building. The mortality now showed not a little abatement; but cases still occurring, I advised Mr. Mackenzie to have the garden manure removed right away from the jail. This was done on 15th February, and, as I have said, there has been no case of relapsing fever in the Common Jail since the 5th March, 1900.

H.M. COMMON PRISON,  
BOMBAY, 13th June, 1900.

Since the last report was written we have only had five mild cases of relapsing fever, and no death, so it may reasonably be inferred that we have got the better of our visitation of this disease.

2. The points of special interest in this interesting experience is the obvious connection between the importation of old dung into the jail and the outbreak of relapsing fever. The case of the hospital attendant was a special and very direct illustration of this. It was this occurrence that opened my eyes to the fact that his illness was due to something in or near the hospital, and the discovery of the cow dung stored in the hospital basement brought conviction to my mind that here was the *materies morbi*; and the ultimate cessation of relapsing fever on the complete removal of the cow dung from the prison precincts seemed to me confirmatory of this view. Captain Lamb, I.M.S., gave a decoction of the cow dung to a monkey with a view to corroborative evidence, but this resulted in failure. The monkey rapidly developed septicæmic symptoms and died, and the fermentative organisms in his blood were too numerous for the detection or isolation of the spirillum. This negative evidence, however, still left room for the belief that the old cow dung in question was the previous habitat of the relapsing fever organism.

3. Be this as it may, I am of opinion that the above reports are possessed of remarkable interest, and on this account I send them for publication.



## CURRENT TOPICS.

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**HONOURS TO GLASGOW MEDICAL MEN.**—The Moxon medal for distinction in research in clinical medicine has been awarded to Sir William T. Gairdner, K.C.B. The Honorary Fellowship of the Royal College of Surgeons was conferred upon Professor William Macewen, F.R.S., at the recent centenary celebration of the College.

**ST. MUNGO'S COLLEGE.**—The Governors have appointed Mr. Alex. Macphail, M.B., C.M., to be Professor of Anatomy in succession to Professor Kent, F.R.C.S., retired. Mr. Macphail has been for six years Senior Demonstrator of Anatomy in the University of Glasgow.

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## MEETINGS OF SOCIETIES.

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### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

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SESSION 1899-1900.

MEETING VIII.—2ND FEBRUARY, 1900.

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*The President, MR. H. E. CLARK, in the Chair.*

#### I.—CASE OF VOLKMANN'S ISCHÆMIC PARALYSIS.

BY DR. RITCHIE THOMSON.

Dr. Thomson showed a little girl, aged 4 years, who first came under his notice early in December, 1899, with a dislocation backwards of the right fore-arm bones. He put up the limb in the extended position, and gradually altered this to one of flexion at a right angle. He used poroplastique as a splint, but left off all apparatus at the end of three weeks. During this time passive movements were performed daily. The fingers assumed the flexed position early in the course of treatment, and he was subsequently unable to straighten them.

There was considerable effusion in front of the elbow, which he then thought might be due to rupture of the main artery, but as time went on, the swelling appeared to be situated in the substance of the flexor muscles. Implication of nerve trunks was not demonstrable so far as anæsthesia was concerned.

The hand was livid and much colder than its fellow, and the thumb and fingers were firmly flexed in the palm. They could be extended in a certain degree by flexing the wrist.

He considered the case one of ischæmic paralysis, and referred to a paper in the *Lancet* of 13th January, 1900, by Mr. Page. He would recommend tendon-lengthening by way of treatment.

## II.—CASE OF CRETINISM.

BY DR. ROBERT KIRK.

This case was shown to illustrate the effects of thyroid treatment since March, 1899, when the patient was previously presented to the Society.

## III.—AN ISOLATED CASE OF FRIEDREICH'S ATAXIA.

BY DR. JAMES CARSLAW.

The patient whom I have brought before the Society first came under my observation at the Western Infirmary Dispensary more than a year ago. He has been examined repeatedly since, and no change has taken place in his condition during that time. It is a case which presents considerable difficulty in diagnosis, and does not by any means correspond accurately with the typical cases of Friedreich's ataxia, though I have ventured to give it that name.

J. M'K. is 20 years of age, and a clerk. His complaint is of some loss of sensation in his fingers, and an inability to use his hands without seeing exactly what he is doing; also of some unsteadiness in his gait. This condition dates back as long as the patient can remember, and he has always had difficulty, for example, in putting on his clothes, and even yet has to be assisted with anything that he cannot actually see. He does not recollect ever having subjective sensory disturbance of his hands or feet. He has had no vertigo, no gastric or other crises, no headache, no pain in his back, no affection of his speech, nor paralysis of limbs. He has had no shooting pains in his limbs nor spasmodic movements.

Nearly ten years ago the patient was for some months in

Professor M'Call Anderson's ward in the Western Infirmary, and at that time he was suffering from irregular jerky movements of his body and his limbs, and also of the head, this having first developed at the age of 8. At this time he was discovered to have some ataxia of both upper and lower limbs, some anæsthesia, especially of the lower limbs, and absence of knee-jerks, but no eye symptoms. About five or six years ago the patient was discovered to have developed some curvature of the spine, which has become only slightly more prominent since.

Though never robust, the patient has had but little illness apart from his present nervous symptoms. There is no story of convulsions in childhood. At the age of 13 he went to work in an office, and has been with the same firm ever since, able to do the usual amount of work as a clerk, and not much inconvenienced by his nervous condition. Indeed, he can write remarkably well, though he must always see what he is doing, and he has even learned to play the piano.

There is a complete absence of nervous illness in any other member of his family, of which he is the youngest. His father was alcoholic, a sea captain, and was drowned at the age of 40, when the patient was an infant. He is said to have been a strong, healthy man, and no history of syphilis can be traced. His mother, aged 55, is healthy and well. Of a family of seven, five are alive and healthy; one died in infancy of "teething." Two sisters are married, and have healthy children. His father had only one sister, who is married, but with no family, and in good health. His mother had only one brother, who is healthy, married, but also with no family. There is no story of any kind of nervous disease in any of his relations.

The patient is of small stature, and rather thin. He has a prominent curvature of the spine, lateral and posterior, and a corresponding deformity of the thorax. There is no pain in the back or limbs. His intelligence is very good, his speech natural, and the special senses all good. The pupils are equal, and the reflexes to light and on accommodation are normal. The visual acuteness and the field of vision are normal, and ophthalmoscopic examination reveals nothing abnormal. At times there is seen a very little nystagmus. There is no strabismus, no facial paralysis, and no deviation of the tongue. The teeth are good and well developed. There is no paralysis of arms or legs, and no tremors, though some irregular movements of the body and limbs are seen during examination. There is marked deficiency of the sense of

touch in both the upper and lower limbs. The anæsthesia extends from the elbow downwards and from the knee downwards, rather more marked on the right side, and most profound in the distal parts. There is with the same distribution less definite analgesia, though the sensation of heat and cold is fairly good. The muscle sense, at least in the hands, is practically gone. As to reflexes, the plantar are both present slightly, the cremasteric is present, but the knee-jerks are quite absent. There are no reflexes got on the arms. There is no disturbance of the bladder or rectum. There is no wasting of the muscles or other trophic change. There is ataxia in both upper and lower limbs, which is easily demonstrated in the usual way, but not sufficiently pronounced to prevent him going about freely and doing an ordinary day's work.

In other respects the patient appears to be quite healthy, examination of the heart, of the lungs, of the digestion, and of the urine revealing nothing amiss.

The principal features of this case to which attention is drawn are, first, its occurrence as an isolated case of nervous disease, which, however, has come on in early life, at least, as early as the age of 8. Secondly, there is nothing in the patient's condition or in his family history to suggest hereditary syphilis. Thirdly, his prominent symptoms are the spinal curvature, loss of deep reflexes, also considerable sensory disturbance and ataxia, both of which are well-marked in the upper limbs as well as in the lower. Fourthly, one would notice certain negative facts—the absence of disturbance of the speech, the absence of eye symptoms (unless, perhaps, some slight nystagmus), the absence of pain in the back, of girdle sensation, of pains shooting through the limbs, and of bladder disturbance.

The case presents considerable resemblance to both locomotor ataxia and Friedreich's ataxia, both of these diseases being characterised by loss of knee-jerk and ataxic phenomena. It differs from locomotor ataxia, however, in many respects, principally the early age of onset and the absence of characteristic eye symptoms. It differs, too, from the typical cases of Friedreich's ataxia in its occurrence alone in a family, in the absence of the characteristic speech, in the absence of any deformity of the hands or feet, and in the presence of such definite sensory disturbance which is usually absent in this disease. The comparatively satisfactory condition of the patient after so many years of symptoms is also unusual. However, I am inclined to place this case under the heading

of Friedreich's, or hereditary, ataxia, recognising that this disease, like syringomyelia and disseminated sclerosis, may present considerable variation from the usual type. No doubt in this case there is a lesion in the posterior part of the spinal cord, probably a developmental lesion of a somewhat different pathology from the spinal sclerosis of locomotor ataxia.

*Dr. Hinshelwood* agreed with *Dr. Carslaw* as to the case being one of Friedreich's ataxia, and he considered that it could not be classified otherwise. He attached great importance to a careful examination of the eyes in this disease.

*Dr. W. K. Hunter* said that he had been very much interested in this case, and that it reminded him of a somewhat similar one reported by Professor Raymond, of Paris, in *Le Progrès Médical* for August, 1897. In discussing his case, Professor Raymond said that locomotor ataxia beginning in childhood was exceedingly rare, and that he could not find the records of more than six undoubted cases. He did not class his patient as such, neither did he consider it as certainly a case of Friedreich's disease. He said it was a "hybrid," with some of the characters of both these conditions. Such "hybrids," he says, are sufficiently numerous to form a subdivision by themselves.

*Dr. Carslaw* replied.

#### IV.—CASE OF EXOPHTHALMIC GOITRE WHICH IMPROVED UNDER TREATMENT WITH ANTIPYRIN.

BY DR. JAMES HINSHELWOOD.

The patient shown to-night as manifesting great improvement under treatment with antipyrin was previously before the Medico-Chirurgical Society on 18th November, 1898, and her case is reported in the *Glasgow Medical Journal* for February, 1899. The patient, a young married woman of 24 years of age, was shown as an illustration of the early occurrence of eye symptoms in exophthalmic goitre. She had presented herself at the Eye Infirmary owing to the disfigurement produced by the prominence and staring appearance of the eyes. There were present also, besides marked exophthalmos with Stellwag's and Von Graefe's symptoms, great nervousness, tachycardia, pulse 120 to 132 per minute, and slight fulness of the thyroid.

The patient was put upon gradually increasing doses of

antipyrin, beginning with 5 grains thrice daily, and increasing gradually up to 30 grains thrice daily. There was a steady improvement in her condition, and a gradual disappearance of the symptoms. The staring and disfiguring prominence of the eyes, for which she sought relief at the Eye Infirmary, has disappeared. When asked to look downwards there is still perceptible a slight lagging behind in the descent of the left upper lid, the only trace of Graefe's symptom still present which was present at the onset in both eyes and in a marked degree. The tachycardia has disappeared, and the patient's pulse is generally about 70 per minute. The extreme nervousness has gone, and the patient expresses herself as feeling quite different. There is no swelling of the thyroid.

The patient is practically cured, and for several months she has expressed herself as feeling quite well. She has continued to attend the Eye Infirmary at my request, as I wished to diminish gradually the dose of the antipyrin instead of dropping it suddenly, and I was also desirous of keeping her under observation.

On the 18th March, 1898, I showed to the Medico-Chirurgical Society a case of exophthalmic goitre with unilateral eye symptoms. This case is reported in the *British Medical Journal*, 25th June, 1898. Here, too, under gradually increasing doses of antipyrin, there was a gradual improvement in the patient's condition, with complete disappearance of all her symptoms.

I have thus shown to the Society, within two years, two cases of this disease cured after treatment with antipyrin. The question arises—Was the gradual improvement in these cases due to the administration of the antipyrin? Although the basis of experience is a narrow one, the observed facts tend in this direction.

We know from clinical experience that cases of exophthalmic goitre recover spontaneously, and that occasionally the patients become cured without any drug treatment whatever. We must, therefore, be very careful in dogmatising on the beneficial effects of any drug until we have had a very wide experience of it. In the two cases brought before the Society, however, the improvement set in so promptly after the administration of the antipyrin, and continued so steadily, that it is difficult to resist the conclusion that the cure was due to the administration of the antipyrin. We must wait further opportunities before speaking more dogmatically on the subject.

It will be observed that, in these two cases, the symptoms

of the disease were slight; in fact, the patients were not aware of anything beyond the disfiguring appearance of the eyes. My impression is that cases in this early stage are much more amenable to treatment by drugs, and it is in such cases I would recommend the antipyrin treatment. Unfortunately, cases at this early stage are rarely seen by the physician in the general hospitals. When there is great enlargement of the thyroid, and the general symptoms are well pronounced, there is less probability of getting favourable results from the administration of drugs.

Great differences of opinion exist as to the etiology, pathology, and treatment of this disease. From a very careful study of the eye symptoms, I have been led to the conclusion that the changes producing these are in the oculomotor nuclei, and, from the negative evidence of pathological anatomy, that the disturbance is one of function and of the nutrition of the nerve elements, as in epilepsy and chorea. In these latter conditions, the treatment by antipyrin has been very successful, and hence, regarding exophthalmic goitre as a disease of the same class, it was hoped that the same favourable results might be got from its administration.

Although our experience of it is as yet too limited to draw dogmatic conclusions, still, the very favourable results obtained in these two cases should encourage us to give this drug a thorough trial in suitable cases. The cases I consider suitable are those in the early stage, when there is but little enlargement of the thyroid, or, better still, when there is no thyroid enlargement at all. By thorough trial, I mean that the drug must be pushed in large doses. This can be done with safety if the dose is increased very gradually and the patient kept under careful observation. In the cases here recorded, the dose was gradually increased from 5 up to 30 grains three times daily, without any unpleasant or alarming symptoms supervening.

V.—CASE OF ARTIFICIAL ANUS FOR MALIGNANT DISEASE OF THE RECTUM WHERE CONTROL WAS OBTAINED OVER THE EVACUATIONS.

BY MR. A. E. MAYLARD.

The usual abdominal incision for exposing the sigmoid flexure and lower part of the descending colon was made in the left groin. The bowel, having been secured, was well drawn out of the wound to the utmost extent admitted, the "slack" being well taken in both from above and below. A

second incision was now made about 3 inches external to and above the first incision. This divided the skin, subcutaneous tissue, and about half the thickness of the muscle wall. By means of the finger a passage was burrowed beneath the musculo-cutaneous bridge, of sufficient size to admit of the loop of bowel being drawn through and out at the second incision. When withdrawn through this aperture, it was secured by a glass rod passed through the mesentery. In about a week's time the protruding loop of colon was excised, although an opening had been previously made in the prominent end of the loop to allow of the escape of gas.

So far it will be seen that the operation resembles in performance Frank's method of performing gastrostomy, and Albert's method of jejunostomy, where, in both instances, the conveyance of the viscus beneath a musculo-cutaneous bridge has the object of restraining the escape of material from within.

This, however, in the case of the colon, does not unaided effect this desirable result, for without some mechanical aid the patient by no voluntary effort can prevent the escape of fæces, for the very good reason that, until the fæces are escaping from the orifice, he has no knowledge that his bowels are moving.

To overcome, therefore, this difficulty, a double spring-pad truss is employed. The anterior pad presses upon the musculo-cutaneous bridge, and, therefore, upon the oblique canal through which the gut passes. It checks the escape of fæces, but does not prevent the passage of flatus.

The truss is not meant for continuous use, but only for such periods as the patient may desire to be free from the possible escape of evacuations.

The operation, to be successful, needs a tolerably free colon, for unless a loop of gut can be withdrawn, it is not possible to perform the operation by this method. In the case previous to this one, where the attempt was made, it was found impossible, owing to the shortness of the meso-sigmoid and meso-colon, which would not allow of a loop being withdrawn from the abdomen.



## MEETING IX.—16TH FEBRUARY, 1900.

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DR. WALKER DOWNIE *in the Chair.*

## I.—TWO CASES OF ABSCESS IN FRONTAL LOBE OF BRAIN.

BY MR. R. H. PARRY

The principal facts gathered from the report of two cases which were under observation for a considerable period, supplemented by a few general statements on points of interest, are submitted as follows:—

I. *Cause.*—A clear history of injury was obtained in both cases. The first patient, a boy, fell on a brick, and when brought to hospital two months later there was a discharging sinus near the right frontal eminence, at the bottom of which small fragments of the brick were found embedded in the bone.

The second patient received her injury through falling on the pavement, and the wound, in this case just above the left frontal eminence, suppurated, and the bone necrosed; but the parts were quite healed when she came under observation three months later.

In respect of cause and the extra-cranial disturbances, these cases may be given as typical examples. Abscess in the frontal lobe is invariably associated with injury and with suppuration in the scalp wound; in some instances the damage to the external parts is slight, and healing proceeds uninterruptedly. The progress of the infective microbes from an incised, punctured, or lacerated wound of the scalp to the white matter of the brain is usually slow, and a series of complications develop before symptoms of the graver lesion become manifest. These are—inflammation of the diploë, necrosis of external and internal tables, pachymeningitis with formation of a varying amount of pus, and encephalitis.

The presence of pyogenic microbes in the wound, and the appearance of complications in a fairly definite order in contiguous structures, afford strong evidence of infection from without inwards. The primary advantage which follows acceptance of this view is the prominence given to preventive treatment; and the teaching now generally accepted, relative

to the dangers attendant on a discharge of purulent matter from the middle ear, might also be applied to suppuration in a wound on the vertex. In discussing, however, the various causes and the prevention of traumatic abscess of brain, a word must be said on the damage to the brain-tissue, as the immediate result of the injury.

Laceration is, I believe, a fairly common occurrence in head injuries in children, and when associated with a septic wound of the scalp it becomes an important factor in the causation of a cerebral abscess. In cases where the damage to the external parts was trifling, and where no local disturbance followed the injury, yet a cerebral abscess developed in the course of months or years, further evidence would seem to be forthcoming of the part played by laceration. When a history of concussion, however slight, is obtained, with a punctured or contused wound of the scalp, the treatment should be directed to a highly probable intra-cranial damage as well, and rest should be insisted on for weeks.

A careful study of temperature and pulse records in the Children's Hospital has convinced me that the effects of a severe blow on the head do not pass for some time.

II. *Age*.—The respective ages of the patients were 4 and 5 years. Traumatic abscess is more common than any other form in childhood, and in a list of twelve cases the age was under 11 years.

III. *Latent period*.—It will be apparent, from the following report of one of the cases which was under observation for ten weeks, that between the appearance of complications in the wound, and that of definite symptoms of abscess-formation, there was a considerable period which may best be described as the latent period.

The case of the girl is also of interest from the fact that an opportunity is so rarely afforded of watching the progress at this period; and, further, that the symptoms simulate closely those of tubercular meningitis. As already noted, the wound was healed when seen on 17th March, 1899, three months after receiving the injury; but it broke down shortly after admission, and advantage was then taken to explore it thoroughly. Nothing being found in the sinus to account for the cedema and tenderness about the wound, the bone was gouged and the dura mater exposed, when it was observed to be quite normal, and the brain pulsations strong and distinct. The general condition was good, and, except when suffering

from occasional frontal headache, the patient was bright and lively. The temperature, taken every four hours, on four occasions registered  $97^{\circ}$ , and on one occasion  $101^{\circ}$ , the average being  $99^{\circ}$ . A slight rise took place after the exploratory operation, and it was noticed that the wound was somewhat slow in healing, although the tenderness and œdema had disappeared. In the course of two or three weeks the temperature became practically normal, and remained so until she was dismissed on the 9th May, after having been in hospital for nearly eight weeks. The pulse, also taken every four hours, was never below 88, and was as high as 136, the average being 105. On dismissal, the wound was healed, the tenderness gone, and there was no complaint of pain.

She was readmitted on the 25th August, the wound having again reopened, and on examination the parts were found to be tender and inflamed, and pus was seen exuding from the sinus. During the eighteen days she was detained in hospital, the temperature remained quite normal, and the wound healed under simple treatment. The question of intra-cranial mischief was discussed. There was an occasional attack of vomiting, headache, and at times a degree of irritability pointing to a probable extension of the inflammatory changes to the brain or its membranes.

Careful examination and observation failed to reveal the presence of symptoms of brain abscess, and, as her condition seemed satisfactory, she was sent to the convalescent home, where for twelve days she appeared well, and was able to amuse herself with the other children; but on the thirteenth day she was seized with vomiting and severe pain in the head, she became very drowsy, and it was only with difficulty that she could be roused. On the following morning she was sent back to the hospital, and three days later 3 oz. of pus were removed from the brain.

In the second case no reliable history could be obtained, and the patient was operated on a few hours after admission.

IV. *Symptoms of abscess.*—These may, for convenience of description, be divided into two groups:—

1. *Symptoms of intra-cranial pressure.*—These were headache, vomiting, optic neuritis, drowsiness, coma, Cheyne-Stokes' respiration, slow and irregular pulse, and slight elevation of temperature. There was no history of rigors, yawning, or hiccough.

2. *Symptoms indicating the probable seat of the abscess.*—A scar in one case and a sinus in the other were unquestion-

ably valuable guides, and in the majority of cases the abscess has been found in the immediate neighbourhood of the damaged bone. Paralysis of the facial muscles on the opposite side, accompanied by paralysis of the levator palpebræ and internal rectus on the same side, was the next and the most important symptom, and the appearance of which, followed by a series of convulsive movements affecting the muscles on both sides of the body, but not in any definite order, and terminating, in one of the patients, in a violent tonic spasm of the muscles of the back, as well as those of the extremities, convinced me of the necessity for immediate operation. During the fit the pupils were widely dilated, and after it had passed off the facial paralysis was more pronounced.

*V. Operation.*—The details of the operations were practically the same in both cases. Chloroform was the anæsthetic used. An incision was made over the cicatrix and a disc of bone removed, when the dura mater bulged out through the opening, but it was observed that the brain pulsations were absent. An incision was then made into the dura mater, when the brain tissue immediately forced its way through, and had for a moment to be kept back by the pressure of a pad of gauze. The brain was then explored, when the abscess was reached at a depth of about  $\frac{3}{4}$  in. A drainage-tube was introduced, and from 2 to 3 oz. of foul-smelling pus flowed away freely. The cavity was irrigated with boracic solution, and the lining membrane gently removed with a small spoon. At this point, in one case, there was a sudden reappearance of pus, which seemed to indicate that a part of the abscess had not been reached owing to collapse of the walls of that already dealt with, and further exploration released about a dessert-spoonful of pus.

Rubber drainage-tubes were inserted, iodoform and boracic dusted over the wound, and a dressing applied.

Marked improvement followed the operation, and within a few hours the patients were conscious and able to give intelligent answers; but in one case, that of the boy, it was found the sight was gone. Pus continued to escape through the tubes for a few days, but it gradually ceased, and the wounds closed in the course of two or three weeks. There was a distinct elevation of temperature for about a fortnight after operation, and the pulse remained over 100; it was not till about the fifth week that recovery seemed to be fairly well established. The boy gradually regained vision in the

eye on the opposite side from that of the abscess, but no improvement took place in the other. He has since been under treatment for epilepsy; otherwise his condition has remained satisfactory. The girl made a perfect recovery, and when seen nine months later was still in excellent health.

## II.—SERUM-PROGNOSIS IN ENTERIC FEVER.

By DR. WM. SCORIE.

The following principles seem to lie at the foundations of any valid doctrine of serum-prognosis.

In the first place, the agglutinating curve is not meant to supersede other elements of prognosis. No less weight is to be attached to the condition of the cardiac muscle, the lungs, the nervous system, and to the course of the temperature. But the condition of the blood-serum probably lies as near the root of the matter as any of these, and any information that can be got regarding it has an equal right to be carefully weighed.

In the second place, the agglutinating curve gets its prognostic value only when taken in close conjunction with the other elements of prognosis. Some estimate of the gravity of the case is required before the element of serum-prognosis gets its value. There are, indeed, some forms of agglutinating curve from which one might approximately reconstruct the history of the case. But in the most trifling forms and the most hopeless forms the agglutinating curve is very similar, and is of no prognostic value apart from a knowledge of the case.

In the third place, the working principle of serum-prognosis is to satisfy oneself whether the hypothetical reaction of defence represented by the agglutinating power is insufficient, sufficient, or superabundant. In a profoundly prostrated case an agglutinating power never rising above 1 to 100 means a very insufficient reaction of defence. In a case with trifling symptoms the same agglutinating curve means nothing. In a sharp case, where the agglutinating curve runs rapidly up to a high figure about the time when the tide may be expected to turn, the progress is, in absence of complications, almost certainly favourable. If we have regard, not to the agglutinating power absolutely, but to its proportion to the severity of the attack, serum prognosis will not be found at fault. It may not be an accurate gauge of the course of individual symptoms, or of the duration of the acute stage; but it is an

accurate gauge—due allowance being made for complications—of the safety of the patient.

The investigation on which those conclusions are based was commenced on 1st November, 1898, and carried on until one hundred consecutive cases had been examined. In the detailed presentation of these cases a fourfold classification was adopted.

The first class consisted of 14 fatal cases. Special importance was attached to two of these cases, as having run their course without any complication. In both cases the symptoms were severe, and the agglutinating power never rose above 1 to 100. In other 3 fatal cases a similar agglutinating curve was observed, but in them complications had some share in determining the fatal issue. The remaining 9 cases were complicated by perforated peritonitis, intestinal hæmorrhage, or pulmonary affections. The serum-prognosis was not in itself bad, but was largely overborne by the gravity of the complications.

The second class consisted of 73 ordinary cases of recovery. Some of these cases were of unknown duration, or were admitted at a late stage, and in these serum-prognosis was sometimes of small value from the agglutinating curve being missed at the critical point. Some cases were so manifestly benign as to make serum-prognosis superfluous. Some cases were ambiguous as regards serum-prognosis, the balance of infection and reaction being so even as to make it impossible to say which was likely to prevail. But after all such eliminations had been made, there remained quite a large proportion of cases in which the serum-prognosis was quite pronounced, and was of great value. In a case of typically good serum-prognosis, the agglutinating curve will be found rising through the second and third weeks, and reaching a high figure about the end of the third week. In such a case the symptoms may be very severe, and the case may clinically be a very bad one. Yet with great regularity such cases become well.

The third class consisted of 10 cases in which a relapse occurred. Some authors think that it is possible from the agglutinating curve to forecast relapses, or at least to select a class of cases in which all, or almost all, relapses are to be found. But, *à priori*, it is much more probable that relapses depend on the condition of the organism as regards immunity, which is quite independent of agglutination. And, appealing to experience, these 10 cases presented no characteristics, as a class, to mark them off from cases of the preceding class.

They illustrated over again the remarks made about ordinary cases of recovery, but they gave no hope of attaining to a method of forecasting relapses.

The fourth class consisted of 3 exceptional cases in which a diagnosis of enteric fever seemed fully warranted, and yet no agglutinating reaction was at any time found. The bearing of such cases need not be discussed here.

A consideration of all those cases seemed to fully warrant the conclusion that the course of the agglutinating curve is a most important factor in the prognosis of enteric fever, frequently eliminating surprises, and enabling one to see days farther ahead than he could without its aid. And if some form of serum therapeutics should come to be adopted for enteric fever, the observation of the agglutinating curve will probably find its chief importance as an indication for this form of treatment, and a gauge of its success in each individual case.

Dr. Scobie submitted a series of charts illustrative of the conclusions stated above.

On the chart the lower curve in red represented the agglutinating power. In all cases serum got by blistering was used; the time allowed was two hours, and the reaction point was the highest point at which agglutination was found. The figures at the left side of the chart represented the degrees of dilution—1 to 100, 1 to 200, &c. The great variation in the agglutinating power in different cases made it impracticable to use the same scale throughout. In some charts the scale rose by intervals of 1,000, in others by intervals of 100.

### III.—CASE OF CIRRHOSIS OF THE LIVER IN WHICH THE INITIAL SYMPTOMS WERE THOSE OF CHRONIC INTESTINAL OBSTRUCTION.

BY DR. J. LINDSAY STEVEN.

Dr. Lindsay Steven's paper will appear as an original article in a future issue of the *Journal*.

## MEETING X.—16TH MARCH, 1900.

DR. J. WALLACE ANDERSON *in the Chair*.I.—A CASE OF HEMIPLEGIA, WITH SPECIAL REFERENCE TO  
DIAGNOSIS AND TREATMENT.

BY PROFESSOR M'CALL ANDERSON.

M. B., æt. 45, riveter, was admitted to Ward II of the Western Infirmary on 15th December, 1899, having lost power of his left side four days previously.

*Family history*.—Owing to his present condition it is impossible to get an exact history; but, so far as his friend knows, it appears to be unimportant, except that he has been much addicted to alcohol.

He seems to have enjoyed good health, with the exception of inflammation of the right lung some years ago.

*History of present attack*.—Four days ago, when attempting to rise from bed, he found that he was unable to do so, owing to loss of power in his left side.

*Present condition*.—There is complete loss of power of the left arm and leg, patient being unable to move a finger or a toe. He answers questions in a slow and somewhat hazy manner. The tongue is protruded slightly to the left side. He does not appear to have difficulty in drinking fluids. The pupils are equal. Reflexes are present, but deficient. Sensation is not impaired. There is slight enlargement of the inguinal glands, and a coppery stain on the right shin. There is no definite history of syphilis, but patient states that he contracted gonorrhœa sixteen years ago.

The treatment was commenced on 20th December. It consisted of 10 grains of iodide of potassium three times a day, this being gradually increased till on 4th January 120 grains were given three times a day. By 31st December patient was very much improved, and on 31st January he was dismissed quite well. The diagnosis was that of a gumma pressing on one of the cerebral arteries.

*Dr. Adamson* suggested that the rapidity of the recovery in this case pointed rather to embolism than to syphilis.

*Prof. McCall Anderson*, in reply to *Dr. Howie*, said that no drug was given along with the iodide of potassium to prevent iodism.



## II.—CASE OF CHOREA, WITH SPECIAL REFERENCE TO TREATMENT.

BY PROFESSOR M'CALL ANDERSON.

A. M'V., æt. 9, admitted on 15th January, 1900, to Ward VII complaining of irregular movements of the body, head, and limbs, and pains in the back and legs—the former of two years' duration in all, and the latter of four months.

*Family history.*—Her father, mother, two sisters, and one brother are alive and well.

*Previous illness.*—She had measles when 2 years of age, otherwise she has enjoyed good health. She is considered to be of a nervous temperament.

*Present complaint.*—Two years ago she began to have irregular movements of the arms and legs, especially on the right side. They did not occur when she was asleep. She was taken to the Children's Hospital, where she remained for four months, and on leaving she was quite able to walk, though there were still some jerking movements present. She was sent to the country for two months, and was quite well on her return.

About fifteen months ago she was sent back to school, when the irregular movements again soon returned, and have persisted ever since.

For the last four months she has also complained of pains in the back, legs, and chest.

On admission the chorea was very marked. She requires assistance to walk, and has to hold on for support when standing. Two nurses are required while washing her in order to keep her steady. She has difficulty in speaking, and has to be fed.

*Treatment: 17th January.*—Rest in bed.

*22nd January.*—Antipyrin, 5 grs. in the day, increasing by 5 grs. in the day.

*31st January.*—Antipyrin, 50 grs. in the day.

*13th February.*—Antipyrin, 100 grs. in the day.

*8th March.*—Antipyrin, 130 grs. in the day.

*15th March.*—Antipyrin, 135 grs. in the day.

Recovery was complete.

## III.—TWO CASES OF GASTROSTOMY.

BY DR. WALKER DOWNIE AND DR. ROBERT KENNEDY.

CASE I.—The patient was a married woman, aged 30, who had been seen at irregular intervals by Dr. Walker Downie at

the throat department of the Western Infirmary. She was admitted to the Infirmary on his recommendation on 6th June, 1899. On Christmas Day, 1897, she had first experienced difficulty in swallowing. On that day a bolus of food had become impacted in the gullet, and it had to be dislodged by the use of an œsophageal bougie. From this time on she had more or less difficulty in swallowing, and during the two months prior to admission she could swallow fluids only, and in very insufficient quantities. She had been, as a consequence, gradually losing flesh, and on admission she was emaciated and extremely weak.

No bougie could be passed through the strictures, each being suddenly stopped in its progress at a distance of 7 ins. from the upper incisor teeth.

Early in 1897 she became hoarse, and this huskiness had persisted. On laryngoscopic examination, prior to admission, the left vocal cord was found to be fixed in the cadaveric position, while the movements of the right cord were free and normal.

To avert death from starvation, gastrostomy was agreed upon.

On 22nd June, 1899, Dr. Kennedy performed gastrostomy by Frank's method. After the operation, which was not followed by any shock, the patient was fed by nutrient enemata until the fourth day, when the stomach was opened by a small incision, and a tube introduced. From this time onwards the patient was fed entirely through the tube with peptonised milk, beef-tea, eggs, soups, &c. She was dismissed from hospital on 15th July, having learned to pass the tube herself. At this time she weighed 7 st.  $\frac{3}{4}$  lb.

At no time has there been leaking from the stomach, and there has been no eczema of the surrounding skin. The patient's nutrition has improved, and on 30th November she weighed 7 st. 13 $\frac{1}{2}$  lb., having thus gained 13 lb. since the operation. It is now about nine months since the operation, and for some time the patient has worn a tube in position on account of the increasing difficulty of introducing it at meal times. The patient has been able for some time to follow her occupation, that of a laundress.

CASE II.—Agnes A., unmarried, aged 32, was admitted to the throat department of the Western Infirmary on 8th December, on account of pains in the throat and difficulty of deglutition. Early in March, 1899, she first experienced pain in the right side of the neck, immediately behind the

thyroid cartilage. The pain was of a gnawing character, and was occasionally increased by the act of swallowing. In October—seven months later—she became aware of a difficulty in getting food over, and at the time of admission to hospital soft food alone could be swallowed. The passage of a No. 6 bougie caused considerable pain. Its passage was obstructed at  $7\frac{1}{2}$  ins. from the upper incisor teeth; but, by a little pressure, it passed beyond the obstruction and into the stomach. The bougie on removal was streaked with blood. She had numerous scars on each side of the neck, which marked the site of former extensive glandular suppuration. This, along with her age, her florid complexion, and the course of her temperature, led us to consider the œsophageal ulcer to be probably of a tubercular nature, and not epitheliomatous; and this opinion was apparently confirmed by the finding of tubercle bacilli in the discharge removed from the lower part of the pharynx.

On 20th January, 1900, Dr. Kennedy performed gastrotomy in order to enable alimentation to be carried on, and to relieve the patient from the pain always associated with attempts to swallow food. The method of operation was Witzel's, and the patient made a good recovery from the operation. She was nourished during the first day by nutrient enemata, but on the day after the operation feeding by the tube was commenced. This was gradually increased, and there was no trouble with the digestion. During the six weeks that the patient lived, feeding was carried on regularly. There was no discomfort from the administration of food, which was freely given, and the great pain and distress in the gullet formerly experienced entirely disappeared.

At the *post-mortem* examination the stomach was found contracted to half its normal capacity, and firmly adherent to the abdominal wall over an area about the size of a half-crown piece. The passage from the skin to the stomach was about  $1\frac{1}{4}$  in. in length, and extended from the skin obliquely downwards to the stomach.

#### IV.—LECTURESHIPS ON TRADE DISEASES.

BY DR. JAMES W. ALLAN.

Dr. Allan's paper appeared as an original article in our issue for May, 1900, at p. 332.

OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1899-1900.

MEETING VIII.—25TH APRIL, 1900.

*The President, DR. ALEX. MILLER, in the Chair.*

I.—MICROSCOPIC SECTIONS ILLUSTRATING VARIOUS CONDITIONS  
OF THE DISEASED ENDOMETRIUM.

BY DR. BALFOUR MARSHALL.

Dr. Marshall showed microscopic sections illustrating various conditions of the diseased endometrium.

II.—INTRA-UTERINE AMPUTATION.

BY DR. ROBERT JARDINE.

Dr. Jardine showed a child, 6 weeks old, in which the right fore-arm was represented by a stump. He considered the case an example of intra-uterine amputation.

III.—SPECIMENS.

A. BY DR. J. M. MUNRO KERR.

Dr. Kerr showed a distended tube, with ovary attached, which he had removed by abdominal section. The case, he remarked, was of interest clinically because it presented all the features of an extra-uterine pregnancy. On examination after removal, it turned out to be a suppurative condition of the tube. The wall was very much thickened, and a small quantity of pus was found in the lumen.

B. BY DR. JOHN EDGAR.

Dr. Edgar showed (1) a fibro-myoma weighing about 16 lb., associated with a pregnancy of three and a half months, which he had removed by supra-vaginal amputation; (2) microscopic sections of the endometrium removed by curette the day before a menstrual period was due. The glands were much dilated and tortuous, and there was a centralisation of blood into the superficial tissues.

C. BY DR. A. W. RUSSELL.

Dr. Russell showed an anencephalic foetus of about six months.

IV.—TWO CASES OF LABOUR WITH COMPLETE OCCLUSION OF THE OS UTERI.

BY DR. ROBERT JARDINE.

Complete occlusion of the os uteri is a very rare complication of labour, and yet, quite recently, I had the good fortune to see two cases within three weeks of each other. A short note of them may be of interest.

CASE I.—Mrs. M., æt. 30, i-para. I was asked by a midwife to see this case, as the labour had been going on for nearly three days. She thought the os was partially dilated.

The patient was a stout, healthy woman. She had been married thirteen years, but this was her first pregnancy. She was not aware of there having been a vaginal discharge during the pregnancy, neither had she suffered any pain.

I found she was having very strong expulsive pains. Bandl's ring was not apparent. *Per vaginam*, the head was felt in the pelvis, with the cervix stretched over it. The os was completely closed, but a small depression revealed its position. As the patient refused to come into hospital, I was forced to treat her under very insanitary conditions.

Dr. Baumann, one of the Maternity residents, kindly gave  $\text{CHCl}_3$  for me. We carefully inspected the parts, exposing the cervix by means of retractors. I managed to tear through the occlusion with my finger-nail. Once through, dilatation was easy, and the delivery of a live child quickly effected with forceps. There was no great tearing of the cervix, and bleeding was slight. The patient made a good recovery. I did not have an opportunity of examining the cervix afterwards.

CASE II.—Mrs. X., æt. 39, vii-para. This patient was first seen at her home by nurses from the hospital. They thought it was a breech presentation. The pains were very strong and frequent. She was brought into the hospital. The resident was at first puzzled with the condition, but after a little recognised that it was a head presentation, with occlusion of the os.

I found the patient was having exceedingly violent pains. Bandl's ring could not be felt. A vaginal examination revealed much the same condition as in the former case, only the position of the os was easier felt. I managed to break down the occlusion with my finger-nail, and then found that the membranes were very firmly adherent all round. On stripping them off, dilatation was easy and rapid.

The case might have been left to nature, but as the woman had suffered severely for about twelve hours from violent pains, I thought it better to end the labour with forceps. The child was alive. The membranes were partially adherent. The cervix was not torn. She made a good recovery.

She had not had any leucorrhœal discharge during the pregnancy, nor had she suffered from pain. The adhesions of the membranes to the lower uterine segment point to there having been some inflammatory action.

I have seen two other cases, one in private and one in hospital along with Dr. Black. In neither of these could we get any history of an inflammatory attack. The occlusion must, of course, occur subsequent to the impregnation, but at what time during the pregnancy there is nothing to show. It must be due to an endocervicitis. This is not a very uncommon condition in pregnancy, and gives rise to a profuse leucorrhœa, especially when there is vaginitis as well. None of these patients complained of this, but it may have been present to a moderate extent without attracting attention.

When the os is completely occluded, the condition may be mistaken for complete dilatation with unruptured membranes. The thinned-out cervix feels exactly like the membranes, but a careful examination will reveal the fact that the smooth surface is continuous with the vaginal mucous membrane in the fornices, and that it is impossible to pass the finger in, as it is stopped by the reflection of the membrane.

Another condition may be mistaken for this, viz., when the anterior lip of the cervix is stretched over the head, while the undilated os is drawn up behind near the promontory.

The position of the os can generally be made out from a small depression being present.

There is some risk of rupture of the uterus occurring. In none of the four cases I have seen was there marked thinning of the lower uterine segment. Bandl's ring was not apparent in any of them, but in all the cervix was very much thinned-out. If rupture were to occur, it would likely be the cervix which would be torn away from the uterus.

*Treatment.*—If the adhesions cannot be broken through with the finger-nail, a small crucial incision should be made at the point where the os was originally situated. If there is no depression to indicate where the os should be, the incision should be made near the centre of the protruding cervix. The case may be left to nature, or rapid dilatation and immediate delivery carried out. In three of the cases immediate delivery was effected, while in the fourth it was left to nature for about twelve hours, and in the end we had to interfere, as the cervix was tearing into one of the lateral fornices. If there is much tearing of the cervix, it should be repaired immediately after delivery. In none of my cases was this necessary. In the three of them examined some time after delivery, the cervix presented the ordinary appearance, without any marked laceration.

#### V.—POST-OPERATIVE VESICAL CALCULUS.

BY DR. A. W. RUSSELL.

Vesical calculi, with a foreign body as a nucleus, have been frequently reported in the medical journals as forming round such articles as a hairpin, a needle, a pencil, a bullet, a bean, a pumpkin seed, a rubber umbrella ring, a sponge tent, a bougie, a catheter, a fragment of bone after a gunshot wound or after pelvic necrosis, a tooth-like body, and also hair from a ruptured dermoid cyst. Surgeons are also aware in their practice of the occasional wandering of a suture or ligature, usually towards the surface of the body through a sinus which has refused to heal until the foreign body has been expelled.

Dr. Jardine showed at a meeting of this Society on 20th January, 1898, two silk stitches which were discharged through a sinus in the abdominal wall after a Cæsarean section performed eleven months previously. In this case several sutures were also discharged through the urethra.

One of the most interesting cases of wandering of a ligature, recorded by Edebohls, deserves mention in passing. He had found it necessary to perform abdominal hysterectomy on a patient from whom he had already removed both appendages to check the growth of a uterine myoma. At the second operation the vermiform appendix was found to be adherent, and was removed. When examined afterwards there was discovered, inside the appendix, the ligature which had surrounded the right tube. The ligature of the left tube had already been discharged through the vagina.

When the wall of the bladder is in any way injured, or its

continuity and smoothness are disturbed, there is a marked tendency to the formation of calculous deposit.

At some future meeting of the Society I hope to report the final results of treatment of a patient from whom, after years of chronic cystitis, I removed a phosphatic incrustation which covered practically the whole of the vesical mucous membrane.

Several cases have been reported in both sexes where calculi have developed after suprapubic cystotomy. I show you here the bigger fragments of a calculus which developed after such an operation, performed by Professor Murdoch Cameron, in order to empty the bladder of blood clot in a case of retroversion of the gravid uterus.

The patient was admitted into the Samaritan Hospital on 13th July, 1897, and was under the care of Dr. David Tindal, by whose courtesy I am able to show the specimen and refer to the particulars. At the operation it was observed that the stone was not freely movable. Owing to its size it had to be broken up, and there is now no trace of the suture.

In all the recorded cases of calculus forming about a suture or a ligature as a nucleus that I have been able to find, the material used has been silk, excepting one described by Hartmann, where it was silver wire. Professor Murdoch Cameron, several years ago, showed at a meeting of this Society several calculi which he had removed from one of his own previous Cæsarean sections. The patient had seen me at the Dispensary of the Western Infirmary, and I sent her to his ward.

On 24th February, 1897, I reported to this Society another case of calculus forming after Cæsarean section, and I show the specimen again to-night (*vide Transactions*, vol. i, p. 21).

I wish now to show a third example of such a calculus, developing in this instance in a patient who had twice undergone abdominal section. At the first operation, performed in the Victoria Infirmary about the end of 1896, the left ovary and tube were removed. She made a good recovery, and remained in good health for some months. In April, 1897, however, she began to have pain in her right side, and micturition became frequent and painful during, and for some time after, the act. After treatment for some time at the Dispensary the urinary trouble was relieved, but she continued to have pain in her right side, and was therefore admitted into the Samaritan Hospital in August, 1898. The urine at the time of admission was noted as normal—no albumen, nor blood, nor pus. Professor Edgar afterwards removed the right ovary and tube, and, at the same time, fixed the fundus



uteri to the peritoneum at the lower angle of the abdominal wound by means of three fine interrupted buried silk sutures. Her recovery was without incident, and she left the hospital on 19th September.

In November she reported herself, and complained of painful micturition, which was relieved after she got an alkaline mixture with hyoscyamus and tolu.

In June, 1899, right lumbar pain, with blood and pus in the urine, were suggestive of renal colic. Calculus could not be detected. She was admitted into the Samaritan Hospital in August, 1899, and I examined her under an anæsthetic, when the calculus which I now show you was found and removed through the dilated urethra. It was found to be lying transversely across the base of the empty bladder, but was really attached to the upper and anterior part. It is over  $2\frac{1}{2}$  inches in length, and is bent almost at a right angle about half an inch from its attached end. A fortnight later the bladder was examined with the cystoscope, and was seen to be normal in appearance.

I have to thank Professor Edgar for allowing me to operate in this case, and for the permission to report it.

The consideration of greatest practical interest in connection with these cases is the prevention of so much misery as is entailed by the formation of vesical calculi after operative procedures, and the outstanding feature is, as already noted, the fact that silk is the material that was used for ligature or suture in practically all the reported cases. Though it is impossible as yet to do entirely without silk, as, for instance, in securing the pedicle of an ovarian tumour, where, however, perfectly aseptic silk is probably quite safe, it is evident that even sterile silk is specially dangerous when it penetrates mucous surfaces; and it seems to me that the cystotomy wound could be closed, ventrofixation could be accomplished, and even the big surfaces of the uterine incision in a Cæsarean section kept securely together without the use of silk.

*Dr. Edgar* referred to the case of ventrofixation, and stated that he might possibly have placed one suture unusually close to the bladder. He also remarked that in Cæsarean section the lowermost stitches were often placed very close to the bladder.

*Dr. Jardine* said these cases were of deep interest to him. Two of his Cæsarean section cases were passing silk stitches through abdominal sinuses from time to time, and one of them

had complained of some bladder irritation. He had not sounded her bladder, but he expected to find a calculus in it before long. It was curious how these stitches migrated from the uterus into the bladder, although they were not in contact with the bladder. He had used catgut in his last Cæsarean section, and intended using it in future. He thought silk should only be used for tying pedicles. He showed two small calculi, which, although not from cases after operation, were of interest from their history. The first, a uric acid one, was passed by a woman who had a large fibroid. She complained of very severe pain along the side of the tumour. There was no blood in the urine. Her temperature was not raised. He was at a loss to explain the cause of the pain. Large doses of morphia relieved her, and some time afterwards she passed the calculus. With a tumour, one was apt to look for the cause of pain from the tumour.

The second calculus, apparently phosphatic, was passed by a patient at the seventh month of her second pregnancy. During her first pregnancy she had repeated attacks of severe pain, and some time after delivery she passed a considerable amount of blood in her urine, and then a calculus. During her second pregnancy, which had recently terminated, she had again had several attacks of pain, and, as he anticipated, the calculus he showed was passed. There was a facet on it, and he expected there was another stone in the kidney, which would probably give trouble at her next pregnancy if it did not come away before then. In pregnancy, as with a tumour, sudden attacks of pain were usually referred to the uterus, but one must bear in mind the fact that the origin might be outside the uterus.

*Dr. Munro Kerr* remarked that in almost all the cases described of calculi forming in the bladder after abdominal or vaginal section, the stitches had been introduced into the tissue close to the bladder. He also referred to the fact that in Cæsarean section the lowermost stitches were often very close up to the bladder, especially if the lower angle of the wall got the least torn, as sometimes occurred in extracting the child.

#### VI.—WEIGHTED VAGINAL SPECULUM.

BY DR. JOHN EDGAR.

The idea of this instrument was suggested by Auvard's well-known speculum. The chief differences are (1) that there are several detachable blades to make the speculum applicable to

all cases, and (2) that the weight is also detachable, so that the instrument can be used as a weighted or as an ordinary unweighted speculum at pleasure.

The advantages of the weight are obvious. In simple operations, such as curettage, an assistant can be dispensed with, while in cases where one or more assistants are necessary, the speculum does not require to be held, and so an extra hand is gained to help with ligatures, sponges, &c.

#### VII.—CURED SPINA BIFIDA, OR SACRAL TERATOMA ?

By DR. JOHN LINDSAY.

Dr. Lindsay's paper appears as an original article at p. 176.

### GLASGOW SOUTHERN MEDICAL SOCIETY.

SESSION 1899-1900.

MEETING XVII.—3RD MAY, 1900.

*The President, DR. HUGH KELLY, in the Chair.*

#### I.—RETRO-DISPLACEMENTS OF THE GRAVID UTERUS, WITH SOME ILLUSTRATIVE CASES.

By DR. J. M. MUNRO KERR.

In introducing the subject of retro-displacements of the gravid uterus, Dr. Kerr made the interesting remark that the great William Hunter was the first to describe the pathological conditions. With regard to the etiology of the affections, it was pointed out that they invariably occurred where there had been a previous displacement. The distension of the bladder, which is a common condition present, was shown to be a consequence of the malposition of the uterus, and not a cause of it, as might be supposed. Dr. Kerr then drew attention to the symptomatology, making particular reference to the difficulty of micturition, the cystitis, and the risk of abortion and peritonitis. With reference to the treatment, the speaker pointed out the need first of emptying the bladder, either by catheter or by suprapubic puncture.

The fingers should then be passed into the rectum or vagina, and the organ replaced—the patient being, if possible, in the semi-prone position.

Having referred to the general aspect of the subject, Dr. Kerr proceeded to detail the account of four cases that had come under his observation, the elucidation of which were greatly helped by the aid of diagrams.

In the discussion which followed, Drs. Black, Jardine, Carstairs Douglas, and Coulson Howie took part.

## II.—CONGENITAL WORD-BLINDNESS.

BY DR. JAMES HINSHELWOOD.

Dr. Hinshelwood read the account of two boys who had been brought to him lately suffering from a condition to which he applied the name of "congenital word-blindness." Other two cases were also quoted on the same subject, one from the writings of Dr. W. Pringle Morgan, and another from Dr. Bastian's recent work on *Aphasia*. In all, it was shown that there was a congenital deficiency, though in different degrees, of the visual memory centre for words and letters. In commenting on the subject, Dr. Hinshelwood reviewed the two stages in the ordinary process of learning to read by sight—first, the storing up in the visual memory the individual letters of the alphabet; and, secondly, the acquiring of the visual memories of words, the latter of which suggest particular ideas. It was pointed out by Dr. Hinshelwood that the visual memories of letters, words, and numbers had each complete functional independence, as evidenced by the fact that many patients completely word- and letter-blind could still read figures; in other words, that these memories were registered in different areas of the cerebral cortex. The difficulty experienced by the patients referred to in learning to read arose from the fact that the visual memory centres for words and letters, situated in the angular and supra-marginal gyri, were congenitally defective. In conclusion, Dr. Hinshelwood alluded to the importance of recognising these defects in children, otherwise there was the danger of their being harshly treated for a defect for which they were in no wise responsible.

On the motion of the *President*, Dr. Hinshelwood was thanked for his contribution.

## MEETING XVIII.—17TH MAY, 1900.

*The Vice-President, DR. WM. WATSON, in the Chair.*

**DEMONSTRATION OF MACROSCOPIC SPECIMENS AND OF MICROSCOPIC SECTIONS, THE LATTER ILLUSTRATIVE OF RECENT ADVANCES IN NERVOUS WORK.**

BY DR. ANDERSON.

A demonstration of *post-mortem* specimens was undertaken by Dr. Anderson, who made some observations on the important features presented. Included among the specimens examined by the members were periosteal sarcoma of tibia, ovarian cystoma, primary carcinoma of liver, and a heart from a rheumatic subject, showing the well-marked conditions found in acute pericarditis and endocarditis.

The microscopic sections, of which there were a large number, showed some interesting examples of nervous tissue, including, among others, section of spinal cord of dog, with ganglionic cells of anterior horn and Nissl bodies; section of cortex from a case of acute mania, showing advanced chromatolysis of nerve cell; section of left motor cortex, from a case of senile insanity, with pigmentary degeneration of nerve cells; section of pia arachnoid, from a case of syphilitic insanity, showing endarteritis obliterans; and examples showing Heller's method of staining for the tracing of degenerations.

DR. A. GRAY showed some sections of the normal cochlea.

DR. CARSTAIRS DOUGLAS showed phenyl-glucosazone crystals from a case of diabetes mellitus by the phenyl-hydrazine test.

## REVIEWS.

*A Manual of Medicine.* Edited by W. H. ALLCHIN, M.D. Lond., F.R.C.P., F.R.S. Ed. Vol. I: General Diseases—Diseases excited by Atmospheric Influences; The Infections. London: Macmillan & Co., Limited. 1900.

HAVING completed, in eight large volumes, the great *System of Medicine*, edited by Professor Allbutt, Messrs. Macmillan now proceed to issue this *Manual of Medicine* in five volumes of more modest dimensions, and under the supervision of another editor. To judge from the volume which now lies beside us, this *Manual* promises in its own way to become as excellent a work as its great predecessor. There is no preface here, but we have a short introduction by the editor, whose only other contribution in this volume is on diseases due to atmospheric influences. Following the introduction, there is a brief classification of general diseases, viz., into (1) those of extrinsic, and (2) those of intrinsic causation. The first class is grouped into diseases due to (a) atmospheric influences, (b) invasion of living organisms (vegetable or animal), and (c) poisons introduced into the body as such. The second class is divided into (a) primary perversions of general nutrition, and (b) diseases of the blood. Dr. Allchin's short but ably written account of diseases dependent on temperature, on atmospheric pressure, and on electricity, comes first after the classification, and leaves the way clear for the subject of infectious diseases, to which the remainder of the present volume is dedicated.

Dr. Sims Woodhead writes on the infections in general. Much of this article is in reality a concise statement of modern bacteriology, and, indeed, nothing strikes us as more revolutionary in this work, as compared with text-books of medicine which are still almost recent, than the degree to which it is saturated all through with the teaching of bacteriology. Dr. Woodhead concludes this particular contribution with a classification of febrile infective diseases into (1) those with which micro-organisms have been definitely associated; (2) those with which micro-organisms have not yet been definitely associated; and (3) those due to protozoa. Thus it comes about that typhus and enteric, which we have so long been accustomed to see ranged side by side in the text-

books, are here placed far apart, as belonging to different groups.

The next article is on fever, by Dr. Hale White, and then follow contributions on the various infections by different writers too numerous to be all named here. We shall allude only to a few points that have struck us. Dr. Caiger is an enthusiastic advocate of the antitoxin treatment of diphtheria. He states that it has reduced the mortality in the hospitals of the Metropolitan Asylums Board from over 30 to about 15 per cent. Dr. Newsholme furnishes a short article on epidemic pneumonia, but the clinical features of the disease are reserved to be considered, we presume, in connection with the subject of lung diseases. Similarly Dr. Coutts gives a general account of tuberculosis, but in this case, too, we may expect further details in connection with the diseases of particular organs. The article on Mediterranean fever is from the pen of one qualified to write, the lamented M. Louis Hughes. Infective leptomeningitis is classed under four types—epidemic cerebrospinal, posterior basic, suppurative, and tuberculous—of which the first three are described in this volume. Mycoses are considered under the headings of actinomycosis, madura foot, and aspergillar mycosis. Dr. Lees writes on acute and sub-acute rheumatism, which have recently been relegated, as here, to a place among the infective diseases.

In a work of this size, some slips must occur. For instance, Weil's disease, which has an article to itself, is not mentioned in the index, and, indeed, one criticism we would make is that the index is drawn up on too restricted a plan. We have long been familiar with the name of Dr. E. W. Goodall, who signs the articles on mumps and on mixed infections, but, according to the list of contributors, these are written by a Dr. Goodall whose initials are not quite the same.

In conclusion, we have only to add that this is an admirable work, creditable in high degree to editor and contributors, publishers and printer, and to the Practice of Medicine in Britain.

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*Encyclopædia Medica.* Under the General Editorship of CHALMERS WATSON, M.B., M.R.C.P.E. Vol. III: Diphtheria to Food. Edinburgh: William Green & Sons. 1900.

THE following are among the more important contributions in this volume:—Diphtheria, by E. W. Goodall; Disinfection, by E. F. Willoughby; Dressings, by C. A. Sturrock; Drug

Eruptions, by R. Glasgow Pattison; Dysentery, by A. Davidson; Eclampsia, by H. Jellett; Ectopic Gestation, by J. Halliday Croom; Eczema, by L. Roberts; Injuries and Diseases of the Elbow-joint, by T. K. Dalziel; Electricity, by W. Harris; Electrolysis, by John Duncan; Enteroptosis, by J. L. Gillespie; Enzymes, by M. Hahn; Epidemiology, by A. Davidson; Epilepsy and Epileptic Colonies, by W. A. Turner; Epiphyses, by Alexis Thomson; Equilibrium and Facial Hemiatrophy, Paralysis, and Spasm, by J. S. R. Russell; Erysipelas, by A. Miles; Fallopian Tubes, by Alban Doran; Fascia, by A. H. Tubby; Favus, by Norman Walker; Fifth Nerve, by R. A. Fleming; Fingers, by W. T. Ritchie; First Aid, by J. W. Dowden; Examination of Pathological Fluids, by T. H. Milroy and D. A. Welsh; Fœtus, by T. W. Eden; and Food, by E. W. Hope. The Ear in its various aspects is treated by A. L. Turner, P. M. Yearsley, W. J. Horne, T. Barr, P. M'Bride, R. M. Johnston, W. Milligan, and A. H. Cheatle; and the Eye by W. A. Frost, A. H. Griffiths, and W. Lang.

There are numerous other articles whose authorship is not indicated, but which have their value in adding to the completeness of the work. There is an immense amount of valuable reading in the present volume, and the cross references give abundant promise of good things yet to come. Mr. Watson is to be heartily congratulated on the excellent progress of his great enterprise.

*Imperative Surgery.* By HOWARD LILIENTHAL, M.D. New York and London: Macmillan & Co., Limited. 1900.

THIS book is intended for "the general practitioner, the specialist, . . . and the recent graduate" who, presumably, have but little experience of general surgery.

The title presupposes the "absence of a surgeon, and the impossibility or inexpediency of removing the patient, or of waiting for expert assistance. . . . As a rule, but a single good method has been given, so that the reader may not find himself in a dilemma as to the selection of an operation."

The subjects treated of include general management of wounds, arranging a dwelling-room for an operation, instruments, &c. Regional surgery is gone into more or less fully, abdominal conditions being treated in considerable detail.

On reading this volume we are struck with two points, viz., some of the operations described, e.g., cholecystotomy, hardly belong to "imperative surgery," as interpreted by the author;



while, again, many of the operations could be done only in a very imperfect manner by anyone not accustomed to and trained in surgery. In many of these the author himself specifies the presence of one or more "trained assistants." At the same time, to those to whom it is not possible to attend clinics from time to time, there is no doubt that this book will prove of great value, both from its lucid descriptions and its excellent illustrations. These latter are quite a feature in the work, and are unsurpassed by anything which we have yet seen.

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*Operative and Practical Surgery for the Use of Students and Practitioners.* By THOMAS CARWARDINE, M.S. Lond., F.R.C.S. With 550 Illustrations, most of which are Original Drawings by the Author. Bristol: John Wright & Co. 1900.

THIS is another excellent production of the West of England press. Few signs of the times are more pleasing than the constantly increasing evidence of high scientific activity in the provincial schools, and Messrs. Wright & Co., of Bristol, are to be congratulated on the part they have already played as publishers of standard medical works.

The present manual is intended to be used only in connection with practical clinical work. It includes the whole field of surgery, and in this respect merits praise. The student need not go seeking other text-books when he comes to study the so-called special branches of surgery. Conversely, we think it would be a great boon to the student, and more especially to the practitioner, if text-books on these special branches divested themselves of their borrowed wealth of surgical details, and of their resemblance to instrument makers' catalogues, and paid more attention to the clinical and more difficult aspects of the particular subject.

The author does well to waste no words on anæsthetics. These "must be learned from the practical instruction of an anæsthetist."

Mr. Carwardine divides his subject into the following ten sections:—I, Preliminary; II, Bandaging, Dislocations, and Fractures; III, General Operations; IV, The Head; V, Neck and Chest; VI, Genito-urinary Surgery; VII, Abdominal Cavity; VIII, The Mid Gut (stomach, intestine, hernia); IX, The Hind Gut; X, Teeth, Nose, Larynx, Ear, and Eye. There is also a copious index.

A chapter in Section I on the examination of patients will be found useful by the clinical student. It anticipates, indeed, much of what appears in subsequent chapters, and at first sight the author's classification seems faulty, but, bearing in mind the practical aim of the book, this objection is of no moment.

A very good account is given of fractures of the skull, and the tabular forms in which the writer distinguishes between concussion, compression, and cerebral irritation, and, again, between cerebral and toxæmic states, will be found very valuable by the student who is preparing for examination.

The directions given on p. 186 for the disinfection of hands will not in many quarters be regarded as adequate, but the author has found them sufficient. *Experientia docet.*

The sections on abdominal surgery, hernia, and intestinal obstruction are all clearly written.

The *rationale* of the various operative procedures is so plainly stated that there is no excuse for any student not being quite conversant with this most important department of surgery, and we might almost say of ordinary professional life.

The remaining sections do not call for special notice.

We have no hesitation in recommending the book to all who are engaged in clinical work.

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*The American Year-Book of Medicine and Surgery: a Digest of Scientific Progress and Authoritative Opinion in all Branches of Medicine and Surgery.* Collected and Arranged, with Critical Editorial Comments, under the General Charge of GEORGE M. GOULD, M.D. (Surgery.) London: Rebman, Limited. 1900.

THIS well-known work now appears in two volumes, *to make it less tiresome to hold in reading, as well as for the convenience of specialists.* Each volume, it may be said, is complete in itself. The one now before us deals with surgery, which it treats under the heads of General Surgery, Obstetrics, Gynecology, Orthopedic Surgery, Ophthalmology, Otology, Diseases of the Nose and Larynx, Anatomy. The names associated with the various departments are a sufficient guarantee of the general excellence of the work.

In reviewing a book which is itself a compilation we cannot do more than call attention to its general features, and to

those chapters which seem to us to be of special interest and value.

Unlike some other digests, this is not more remarkable for what it contains than for what it passes over in silence. No attempt is made to include everything that has been written during the past year on surgery. The various writers have exercised a wise discretion in selecting from the various general and special journals only what seems likely to possess permanent interest, and by their own editorial comments they have greatly enhanced the general value of the work. We are inclined to say that this *Year-Book* is quite indispensable to all who are engaged in teaching general or special surgery. The literary style is throughout good.

Under the heading of Cysts and Tumours we note a very good account of the views held by leading surgeons on malignant disease, especially of the breast, and the principles which underlie the treatment of that condition. Ample evidence is given of the improved statistics which followed the adoption of Halsted's operation. "*He thinks it likely that he will come to remove the contents of the anterior mediastinum. His operation requires from two to four hours to carry out, and he makes it practically bloodless. Over 52 per cent of his patients lived more than three years without either local recurrence or metastasis.*" Such results should be widely known.

The section on the surgery of the stomach is equally good. A Glasgow surgeon gets credit for advocating exploratory operations in obscure cases with gastric symptoms, but Roux, of Lausanne, strenuously upheld this procedure a couple of years ago in Pozzi's *Révue*. The views of other surgeons are also given.

An editorial comment on Dieulafoy's statement that no person should die of appendicitis is pointed and just. "As well say that no ship should be lost."

Other subjects considered under General Surgery are hernia, diseases of liver and other abdominal viscera, diseases of respiratory organs, of the vascular system (aneurysm, wounds, varix, &c.), of the lymphatic system, and thyroid, &c., &c. This must suffice to show the thoroughness with which the compilation has been made.

The sections of Obstetrics and Gynecology do not call for special notice, but they fairly represent the various problems which are presently being discussed in these branches of surgery. The special journals devoted to these subjects are so numerous, not to mention the fact that they have a *Jahrbuch*

of their own, that the editors may have shrunk from the colossal task of making anything like a review of them, or what is more probable, they have exercised a very wise discretion in this department.

The remaining sections, the index, and the illustrations call for equally high praise.

We recommend this *Year-Book* to all practitioners who desire to keep abreast of the times; as for surgeons, we would say it is a book which no surgeon's library should be without.

*Midwifery Notes for the Use of Students.* By T. A. GLOVER, M.D. Edin. Edinburgh: E. & S. Livingstone.

IN his preface the author states that "these notes are meant for the use of the student attending cases of midwifery, and are in no way meant to take the place of the regular text-books, or to be an excuse for missing lectures." We pity any poor student who should be foolish enough to rely upon them. In the day of reckoning he would certainly find them a broken reed.

As our space is limited, we shall merely give a few of the statements and some of the advice contained in the book. Chorea is not an uncommon complication of pregnancy. The placenta is usually separated by the last few pains before the child is expelled. This statement is made in three different places. Inflammation of the breast is caused by a blow or exposure to cold, and in many cases there is some constitutional predisposition. Phlegmasia alba dolens is, perhaps, the most common of all puerperal diseases. These facts are all new to us, and we believe they will be to most obstetricians.

Now for some of his advice, which, it must be borne in mind, is intended for students attending cases of midwifery before they have mastered the subject. The student is advised to carry chloroform and forceps. A chapter is devoted to the methods of applying the forceps, and the student is advised to use them in cases of uterine inertia, but the climax is reached when rigidity of the cervix is to be treated by incisions in four different directions with a blunt-pointed bistoury. "The extreme necessity of cleanliness need not be urged at any length nowadays" is a statement we entirely disagree with. We hold that not only should the attendant, be he doctor, student, or nurse, keep himself or herself absolutely clean, but the patient should be kept in the same condition during

labour and the puerperium. On this latter most important point the only advice he gives is that after the third stage is over, the binder is to be applied "from the pubes to the ensiform cartilage," and the external genitals are then to be carefully washed and a warm antiseptic napkin applied, and all soiled sheets withdrawn, but the toilet of the patient is not to be made for an hour or two. Our method differs considerably from this. The cart seems to have got before the horse in this description.

We might point out many more items of the same kind as those we have already given, but we refrain. However, we must remind the author that besides the unavoidable hæmorrhage due to placenta prævia, there is another form of antepartum hæmorrhage, known as accidental, which he has forgotten to mention.

We think that the first-class honours friend who assisted the author in the revisal of the proofs would have acted a much more friendly part if he had quietly advised the commital of the lot to the waste-paper basket.

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*Manual of Midwifery.* By W. E. FOTHERGILL, M.A., B.Sc., M.D.  
Edinburgh: William F. Clay. 1900.

THE first edition of this book was reviewed here on its appearance in 1896. The work has been revised, and about twenty pages added to the text, as also some fresh illustrations. For example, the treatment of eclampsia by saline injections is described. In general, the work is of the character described in the earlier review.

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*Nervous and Mental Diseases.* By ARCHIBALD CHURCH, M.D.,  
and FREDERICK PETERSON, M.D. With 305 Illustrations.  
London: The Rebman Publishing Co., Limited. 1899.

THIS is not a joint work by the two authors whose names appear on the title-page, but consists, rather, of two monographs by separate writers with one index and cover in common. About three-fourths of the volume are devoted to neurology, the remainder being allotted to psychiatry.

The text of the first division of the volume commences with a series of chapters on the examination of patients, and then proceeds to the diseases of the cerebral meninges and

cranial nerves. Then follow diseases of the brain proper, diseases of the spinal meninges and spinal nerves, diseases of the cord proper, diseases of the general nervous system, with known anatomical basis; diseases of the nervous system, without known anatomical basis; and, finally, symptomatic disorders. This classification is, perhaps, as scientific as a practically useful one can be.

Objection must be taken to some of the author's statements, as, for instance, the following (p. 31)—“A blow on the patellar tendon stimulates centripetally the lumbar center, and a contraction in the extensor muscles of the thigh results in the ‘knee-jerk.’” This is, we believe, either inaccurate or put in a misleading way. If the writer believes that the knee-jerk is a directly reflex phenomenon, he ought to give us his reasons for disregarding the difficulty presented by the shortness of the reaction-time. On the same page, he tells us that the distinction made between superficial and deep reflexes is of no value. Is it not an important difference that in hemiplegia, loss of the cutaneous reflexes is present from the onset, if at all; whereas a lasting change (increase, be it remarked) in the deep reflexes may not begin for a week or more after the onset of the palsy?

While allusion is made (p. 33) to the reflex contraction of the palmaris brevis, a phenomenon whose significance cannot yet be said to be ascertained, too little is said of the plantar reflex, and the distinction between flexion and extension of the great toe is not touched on at all.

By a slip we have “Gasserian” for “Glaserian” fissure, as the aperture of exit of the chorda tympani (p. 110).

Little omissions, also, are noticeable. For instance, we find no allusion to the stereognostic sense, or to family periodic paralysis, a disease about which a good deal has been written of late in America.

The portion of the work which treats of mental diseases is divided into thirteen chapters, the first five of which are taken up with such subjects as classification, general etiology, symptomatology and treatment, modes of examination, diagnosis and prognosis. The next four chapters are occupied with mania, melancholia, circular insanity and epileptic insanity respectively. Chapter X is on the secondary, senile, and primary dementias, and Chapter XI on the paralytic type of dementia. Chapter XII deals with paranoia, and Chapter XIII with idiocy.

Dr. Peterson states that “among the native Egyptians, where syphilis is one of the most widespread of disorders, scarcely

a case of general paresis has been reported," and argues that it is therefore impossible to consider syphilis a direct cause of paralytic dementia. On the other hand, Dr. Mott, in a recent lecture, quotes Dr. Warnock's report on the Egyptian hospital for the insane, which shows that, in 1899, 57 general paralytics were under care out of an asylum population of 500. Syphilis was known to be the cause in 29 out of the 35 cases admitted, and 24 of these were native Egyptians.

Both monographs, which make up this volume, deserve high commendation. They are elaborate if not complete, written in a very readable style, and well provided with excellent illustrations. The letterpress is all that could be desired.

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*The Nervous System of the Child: Its Growth and Health in Education.* By FRANCIS WARNER, M.D. Lond., F.R.C.P., F.R.C.S. Eng. New York: The Macmillan Co. 1900.

THIS little volume of over 230 pages, written by one who is an acknowledged master of his subject, is addressed to school teachers rather than to parents or medical men. Though the book is written with special relation to the school age and to education, rather than to life in the family, the subject of brain and body in infancy and early childhood is considered at some length in the earlier pages. Chapters III and VI give us an account of the child at school, and a scheme for the classification of school children. Chapter V is on the evolution of the child and his brain power. Chapter VI is on hygiene and feeding. Chapters VII and VIII deal with training, teaching, and school method. In Chapters IX and X the health and training of the nerve centres, mental hygiene, and voluntary mental power are discussed.

The volume concludes with a bibliography of the author's writings on the scientific study of children, and with a voluminous index.

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*Anæsthetics: Their Uses and Administration.* By DUDLEY W. BUXTON, M.D. Third Edition. London: H. K. Lewis. 1900.

WE have read this edition of Dr. Buxton's well-known work with much pleasure. It includes within its scope not only the anæsthetic agents in general use, but also those which are

more rarely employed, such as amylene, pental, &c., while a special chapter is devoted to the subject of anæsthetics in obstetric surgery. There are numerous figures illustrating apparatus, and the descriptions of these in the text are clearly put.

The author evidently leans to the use of ether, although he freely admits its disadvantages in certain classes of cases. He is somewhat sceptical as to the good results of the use of chloroform in Scotland, but in spite of his remarks on the subject we consider that this anæsthetic is the most convenient for general use, while, in the hands of an experienced administrator, its safety is well-established. We would recommend all to peruse the chapter on chloroform, and also that on the "Accidents of Anæsthesia."

The medico-legal aspects of the subject are fully dealt with; but whatever legal responsibility may attach to the anæsthetist, we are afraid that in the public mind the surgeon will be held accountable for any fatality which may occur.

More careful reading of the proofs might have been indulged in with advantage; a glaring example of bad construction is to be met with on p. 283, in the paragraph headed "In dental surgery."

We can recommend the book to all who are engaged in the administration of anæsthetics, as well as to those about to begin.

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*Appendicitis.* By A. H. TUBBY. Medical Monograph Series, No. III. London: Baillière, Tindall & Cox. 1900.

THIS little book is very readable, and presents in a concise but clear form the main features of the ailment with which it deals. The author's conclusions as to prognosis and treatment are sound and practical, and will be welcomed even by those who have both time and patience to read a larger work on the subject.

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*Operations - Vademecum für den praktischen Arzt.* By PROFESSOR DR. E. LESER. Berlin: S. Karger. 1900.

THIS is a small volume of 190 pages, illustrated by 143 illustrations (the majority of which are taken from Kocher's work), and designed by the author for the use of general practitioners. An account of all the operations of surgery is



not given, but only those which the author considers may be of use to men who are not in the way of doing operative work regularly. It is, therefore, incomplete, and this is really the fault of the work, for, while those operations that are taken up are well described, it is not an easy matter to say what a general practitioner should do and what he should not do. Thus we find that the author advises that a trephining should not be attempted, but two methods of intestinal anastomoses are fully described—yet the former operation may be as urgent as the latter. There is a quite satisfactory chapter on anæsthetics and antiseptics, which is short, and sensible, and practical. A good account of the high and low tracheotomies, and the after-treatment of such cases, is given. The amputations and excisions of joints are well done, too, but it is unfortunate that so many gaps exist in the book, which is thereby rendered useless to students and those with any experience of operative surgery; while, as far as the general practitioner of this country is concerned, considering the choice of works on operative surgery offered to him in his own language, this book does not fill any want.

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*The Anatomy of the Brain: A Text-Book for Medical Students.* By RICHARD H. WHITEHEAD, M.D. Illustrated with 41 Engravings. Philadelphia: The F. A. Davis Co. 1900.

THIS is not a large work, since the text only extends over 92 pages, a considerable number of which are taken up with illustrations. Most of the latter are very good, and some of them appear to be original. The author is possessed of a good style, and deserves praise for the manner in which he has done his work. He has aimed, he says, at furnishing medical students with "a clear, accurate, and concise account of the anatomy of the brain, to be used as a guide in their study of that organ." Minor details and controversial matters are omitted as far as possible.

We are disposed to make two criticisms on this work. The first is that, in view of its scope, aims, and size, an account of the spinal cord ought to have been included in the volume, and this not the less since the fourth and last chapter is on the conducting paths of the encephalon. The other criticism is that the work strikes us as just too concise for the junior student, unless he has a good tutor to guide him; and

if, therefore, the senior student and practitioner are most likely to benefit by it, the interest, if not the usefulness, of the book might have been augmented if some minor details, and even a little controversial matter, had been admitted.

The book is divided into four chapters, in which are described the divisions, the surface anatomy, the internal anatomy, and the conducting paths of the encephalon. Though, in the main, a creditable piece of work, it cannot take the place of the standard text-books in this country.

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*The Edinburgh Medical Journal.* Edited by G. A. GIBSON, M.D., F.R.C.P. Ed. New Series—Vol. VII. Edinburgh and London: Young J. Pentland. 1900.

THIS new volume, by the high standard maintained by the original articles, reviews of books, summaries of recent advances in medical science, &c., fitly merits the cordial welcome repeatedly offered to its predecessors in this *Journal*. It reflects high credit on the Edinburgh school.

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*Bubonic Plague: Its Course and Symptoms, and Means of Prevention and Treatment, according to the Latest Scientific Discoveries, including Notes of Cases in Oporto.* With an Appendix specially written by the Author for the English Edition. By Dr. JOSÉ VERDES MONTENEGRO. Authorised Translation by W. MUNRO, M.D. London: Baillière, Tindall & Cox. 1900.

THE title of this work, as transcribed in full above, gives a very fair idea of its aims and scope. The author's purpose is to give his reader a thoroughly up-to-date summary of what is known about bubonic plague, and the fact that the appendix is dated in February of the current year shows how fresh its data ought to be. The subject is treated in the text in the following order:—"Biological characters of the organism, modes of infection, vehicles of contagion, mechanism of diffusion, prophylaxis, sanitary measures, the disease itself, sero-therapeutics, the plague in Oporto. Thereafter is the appendix, followed by a bibliography. The work is well conceived, well written, and well translated, and may be commended

to all practitioners who wish to be prepared to recognise and deal with the disease before, rather than after, they have actually made its acquaintance.

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*Transactions of the Twenty-first Annual Meeting of the American Laryngological Association.* New York: D. Appleton & Co. 1900.

THIS volume of *Transactions* is a proof of the vigorous condition of the American Laryngological Association. The contributions are all interesting; some are highly valuable.

Dr. Farlow discusses, "Is the So-called American Voice due to Catarrhal or other Pathological Conditions of the Nose?" Both he and the subsequent speakers seem agreed that this question should be answered in the negative, and that the peculiar nasal twang is due to imitation. The condition may be avoided by placing a child amongst those who speak properly, and may be corrected in the adult by voice-training.

Several instructive papers deal with tonsillar affections. Goodale writes on "Acute Suppurative Processes in the Faucial Tonsils," and concludes that the pyogenic infection of the follicles is probably secondary to a previous infection of the crypts by the streptococcus pyogenes. In two cases, accompanied by circumtonsillar inflammation, this complication may have been due to the discharge observed of an abscess into the efferent lymph channels. Leland, under "Tonsillar and Circumtonsillar Abscess," recommends splitting the tonsil with the sickle knife, followed by the introduction of the finger into the abscess sac, and the tearing through of the tonsillar tissue. Ward describes two cases of "Septic Thrombophlebitis as a Complication of Peritonsillar Abscess;" and Hubbard reports two of peritonsillar abscess associated with diphtheria.

"The Relation of Pathological Conditions of the Ethmoid Region of the Nose to Asthma" is discussed by various authorities in a series of papers. We cannot say, however, that our knowledge of the subject has been much advanced by their perusal.

As aids to the early diagnosis of aneurysm of the arch, Porter suggests the use of an œsophageal bougie. The lower end of this is made distensible, and passed down opposite the site of the suspected aneurysm, the impulse of which

is conveyed to the distal end of the tube, and measured by a manometer. He also recommends auscultation of the aneurysm by way of the œsophagus. A sound is passed—to its outer end a disc is screwed, and to the latter a stethoscope is applied.

The papers on diseases of the accessory cavities in the latter part of the volume contain nothing specially novel.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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### NERVOUS DISEASES AND INSANITY.

BY DR. R. S. STEWART.

**The Semeiologic Value of the Reflexes of the Toes.** By Verger and Abadie (*Le Progrès Médical*, 28th April, 1900).—Babinski, in 1896, first drew attention to the fact that tickling of the sole in cases where the lateral columns of the cord are involved is followed by extension of the toes in place of flexion. The present writers point out that Babinski's method is liable to many sources of error. It is very variable in different subjects, and even in the same subject, and cannot be considered as a symptom of the first order. In particular, it cannot be compared with ankle-clonus or the patellar reflex.

**The Treatment of Epilepsy by Flechsig's Method.** By Seglas and Heitz (*Archives de Neurologie*, August, 1900).—Flechsig claimed that the preliminary administration of opium, by lowering the excitability of the brain, resulted in the toleration of increased doses of the bromides. The results obtained by these two observers in 12 cases subjected to this method were not encouraging. In 5, various accidents, vomiting, abundant diarrhœa, albuminuria, oliguria, lowering of the respiration, rapid loss of weight, and grave psychical troubles, necessitated the discontinuance of the treatment, and in only 3 cases was there any great diminution in the number of the seizures. They consider that Flechsig's treatment is borne by only a very restricted number of patients, that its administration requires very particular care and supervision, that it is always difficult and often even dangerous, that these contra-indications are far from being compensated by the benefits, and that these last do not appear to be superior to those of the simple bromide cure.

**Syphilitic Meningo-Myelitis with Argyll Robertson Sign.** By Cestan (*Archives de Neurologie*, August, 1900).—The four cases here described present themselves under two aspects. On the one part there is the well-known spasmodic aspect of syphilitic paraplegia of Erb, with progressive evolution, exaggeration of the tendon reflexes, spinal trepidation, Babinaki's toes-sign, urinary troubles, and lumbar pains; on the other, the tabetiform aspect as evidenced by the presence of the Argyll Robertson sign. For the explanation of this morbid association there are two possible hypotheses. Either the Argyll Robertson sign is the outcome of the syphilis of the nerve-

centres apart from the tabetic lesion of the posterior columns, or it may be the indication of an association of tabetic lesions with the lesions of transverse myelitis, and pathological anatomy alone is capable of elucidating the question.

**New Pupillary Symptoms in Tabes.**—By Piltz (*Archives de Neurologie*, August, 1900).—Two reactions of the pupil other than those related to light and accommodation are described. When the eyes are energetically closed and suddenly opened, the pupils are seen strongly contracted. This symptom is met with particularly in subjects whose pupils are rigid, and was present in 50 per cent of general paralytics, in 32 per cent of patients suffering from catatonia and in 6 per cent of normal subjects, and in 44 per cent of cases of tabes. The second symptom is a somewhat analogous phenomenon. On preventing the closing of the eyes by the forcible holding open of the eyelids, the eyeball is drawn upwards and inwards, and the pupil is distinctly contracted. This is found to occur in 75 per cent of general paralytics, in 48 per cent of patients suffering from catatonia and also in 48 per cent of normal subjects, and in 42 per cent of cases of tabes. It is pointed out by way of explanation that, on the occasion of the forcible closing of the lids, there are produced in the iris two opposing tendencies. At first there is a tendency to dilatation due to the withdrawal of the light, and afterwards a tendency to contraction. These two tendencies mutually combat each other, but in the normal individual dilatation predominates. In general paralysis and tabes, on the contrary, where the light reflex, and consequently the tendency to dilatation, are abolished, the tendency to contraction exists alone. Inasmuch as the second phenomenon is found in no fewer than 48 per cent of normal individuals, it is only the first that presents a certain clinical value when associated with other symptoms.

**The Etiology of Progressive Paralysis.** By Krafft-Ebing (*American Journal of Insanity*, April, 1900).—The tone of this article is distinctly pessimistic. The whole social fabric, says the writer, bears in itself the marks of decadence. Amongst the diseases evolved by the nineteenth-century civilisation, next to the so-called neurasthenia, this morbid product of a high grade of culture, progressive paralysis, occupies a prominent place. Almost entirely unknown a hundred years ago, from decade to decade the number of cases has increased almost everywhere at such an alarming rate that to-day even the ordinary layman is acquainted with paresis, and one cannot but be impressed with the idea that a basis for the disease—a veritable spectre which threatens the civilised man—is to be found in unfavourable influences exerted by modern life. The fact that, with this relative increase of paresis, there has been noted a corresponding decrease in the percentage of certain other psychical disorders which are essentially of a functional and benign character, shows that there is a special predisposition in the people of to-day, as a result of which certain pernicious agents that formerly were capable of bringing about only a functional defect of the brain now occasion organic disease in the form of inflammatory and atrophic processes. And not only is the disease more frequent, but it now seeks out its victims at a much earlier period of their lives. In the earlier part of the century the average age at onset was found to be 44 years; at the end of the eighties it was from 36 to 40; and still more startling is the occurrence of the affection in childhood and youth, only lately noted. Another ominous feature in this connection is to be found in the increase of paresis among females. Until well on in the sixties the number of male to female paretics stood in the proportion of 8 to 1, while in the eighties it was calculated to be about 3·4 to 1.

Inasmuch as heredity plays but a comparatively unimportant part in the etiology of the disease, its essential basis has to be looked for in certain exogenic conditions. To the pernicious effects on mind and body brought about by the inordinate demands in earlier life of the present social conditions, to the abuse of condiments and stimulants, especially of alcohol, to a

debauched manner of living, is to be ascribed in the main the increased incidence of paresis. For various and very powerful reasons, the writer sums up strongly in favour of the assumption that syphilis is a *conditio sine qua non* for the occurrence of general paralysis. Were one limited, he says, to two words in which to set forth the etiology of paresis, they would be *syphilis* and *civilisation*.

It may be pointed out here that Krafft-Ebing's knowledge of the facts of this disease, so far at least as they apply to England, is not up to date. On the Continent, in Scotland, and in Ireland, the disease continues to increase. In England, on the other hand, there is quite unmistakeable evidence of a steady and progressive decline in the prevalence of the disease during the past five years. The English brain is evidently in advance of its neighbours in adapting itself to the altered social conditions.

## MATERIA MEDICA AND THERAPEUTICS.

By R. BARCLAY NESS, M.A., M.B., C.M.

**The Therapeutics of Tuberculosis.**—Dr. Lawrence F. Flick (*Detroit Therapeutic Gazette*, 15th January, 1900, p. 1) says the therapeutics of tuberculosis may be predicated upon (1) the predisposition, the resisting power, and the eccentricities of the patient; (2) the tubercle bacillus; (3) disease germs which set up mixed infection.

The most important factor in the recovery from tuberculosis is resisting power, which, if present, must be added to, and if wanting, must be supplied. Whatever makes for resisting power makes for recovery. In a general way, medicines which help to digest food, to improve assimilation, and to keep in normal condition the functions of the important organs of the body, are indicated. Nothing ought to be given which may irritate or interfere with an organ. Nothing should be given to a patient which disagrees with him, no matter how well it may have done in another case.

Drugs may be useful in building up resisting power for the patient. Amongst the more useful are strychnine, digitalis, mercury, mineral acids, vegetable tonics, and iron.

As to treatment directed against the tubercle bacillus, it is practically impossible to accomplish anything by direct attack upon the bacillus. Our hope lies with the indirect method of attack on the bacillus by destruction of soil. For this purpose we have the nucleins, the serums, and a limited number of drugs, of which iodine is perhaps the most valuable. It is, however, when mixed infection takes place that tuberculosis becomes a dangerous disease, and the main point is, when possible, to keep the patient from infection from other organisms. For example, tuberculous subjects should keep away from persons having colds. Mixed infection, in which the pus-producing germs take part, is the most serious condition into which a tuberculous subject can fall. The one remedy which brings some comfort and encouragement in the struggle against this condition is, in the author's opinion, creosote.—(J. Edward Squire, M.D., *Treatment*, April, 1900.)

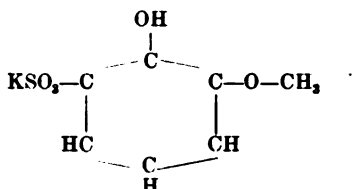
**Thiocol "Roche" in Pulmonary Phthisis.**—An interesting paper appears in the *Therapist*, 16th April, 1900, by John Moir, L.R.C.P., L.R.C.S.E., in which he advocates the use of thiocol, a derivative of guaiacol. Creosote for some time has been pharmacopœical, but its disagreeable properties have led practitioners to substitute for it its most valuable constituent, namely, guaiacol.

Guaiacol, like creosote, is an oily liquid, having a disagreeable odour and taste. It has sparingly soluble properties, and is not readily absorbed.

Guaiacol compounds, such as the carbonate of guaiacol, which is a white insoluble powder, have also been much used, and with about the same degree of success; but the insolubility of both guaiacol and its compounds, and their non-absorptive qualities, have detracted greatly from their usefulness, only 7 per cent of guaiacol or its preparations being absorbed.

Thiocol has, on the other hand, distinct advantages over guaiacol and its compounds in these respects.

Its chemical constitution is represented by the name ortho-guaiacol-sulphonate of potassium, and has the following formula :—



Here it is evident that the phenol group (HO) is intact, and that the sulpho group (KSO<sub>3</sub>) is in ortho-position to it. It differs from guaiacol, chemically, in the presence of this latter group, and this is just another example of how readily aromatic compounds yield sulphonic derivatives by the displacement of hydrogen of the nucleus.

Thiocol contains 52 per cent of guaiacol, but differs considerably in its physical properties from such compounds as the carbonate of guaiacol.

Thiocol is a white micro-crystalline powder, free from odour, and possessing a slightly saline but not disagreeable taste. It is readily soluble in water, and readily absorbed into the system; it is non-irritant and non-toxic; it causes no burning sensation in the mouth and throat, and may be continued in doses up to 2 drachms a day without giving rise to any unpleasant symptoms. It can be given either in plain powder from half a drachm to 2 drachms a day, divided into three equal doses taken after meals, or in capsule, tablet, or cachet, or it may be taken combined with syrup of orange, which disguises any little taste it may possess. The combination with syrup of orange may be obtained in the market under the name of "sirolin" (Messrs. F. Hoffmann-La Roche & Co.)

Thiocol, besides being largely absorbed into the general circulation, possesses the further advantage of being again very rapidly excreted. It is found after its administration that nearly all the sulphur is found in the urine as sulphate, with a small proportion of guaiacol sulphonate.

The chief advantages, then, which thiocol is credited with are these :—

1. Absence of any disagreeable taste or odour.
2. Its non-irritating and non-toxic properties.
3. The readiness with which it dissolves in water, and with which it is absorbed into the system.

Further, with regard to its efficacy in the treatment of phthisis. Thiocol was first used clinically by Dr. C. Schwarz, of Neustadt, who states that the favourable action of the drug becomes very soon manifest—by the perceptible increase of appetite and strength, improvement of the general health, and increase in body weight; by the intensity and frequency of cough rapidly diminishing; expectoration becoming looser, less copious, and gradually losing its purulent character; and the night sweats ceasing. In febrile cases the temperature decreases without the use of antipyretics, and the fever gradually disappears. As regards local changes, the physical signs in cases that have not advanced too far improve and gradually disappear. With regard to determining its effects upon cavities, further experiences are needed.

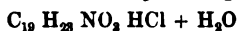
Other authorities are quoted who give good accounts of the beneficial effects obtained. Dr. Moir, the writer of the paper under consideration, has also

had results which suggest a further and more extended trial of a drug so much praised elsewhere.

Personally, I have seen it given in many cases. While it is difficult to speak dogmatically on such a subject, I confess I was to some extent pleased with the results, inasmuch as the drug could be given without any likelihood of its disturbing the stomach. This effect is common with the use of creosote and guaiacol, so that one can readily understand the disinclination that is becoming common to throw over such drugs when, under the open-air treatment of phthisis, with good feeding, a patient will rapidly put on flesh without drugs being used at all.

In the case of thiochol there is not the same objection. It deserves, therefore, a fair trial, and may prove a useful adjunct to the new methods of treatment at present adopted.

### Dionin (Hydrochlorate of Ethyl-Morphia)—



This is a white crystalline powder, having a moderately bitter taste, and being freely soluble in water and alcohol. . . . Dionin owes its clinical importance to the observed fact that the ethyl compounds are pharmacodynamically superior to the non-alkylised and the methylised compounds. It is, for example, a well-known fact that phenacetin, ethyl-urethane, trional, and other therapeutically similar ethyl compounds act better than the corresponding methylised bodies—viz., methacetin, methyl-urethane, sulphonal, &c. It was therefore to be expected that dionin would prove superior to codeine, and that it might be a mild and pleasant substitute for morphia. Korte admits that dionin is not so reliable as morphia as a general analgesic medium, but it is far less apt to cause habitual craving, and can be discontinued without hesitation. It is, however, as a means of relieving cough and bronchitis of various origins, more especially phthisical cough, that it stands out most prominently. It possesses, also, a generally soothing effect, and produces sleep, promotes respiration, and seems also to have a favourable effect upon night sweats. Undesirable effects upon the stomach and intestines (nausea and constipation), such as are frequently observable in the case of morphia, were to be witnessed in a few isolated cases only.

As regards the prescription of dionin, it is advisable to adopt the same dosing as in the case of codeine: 0·02 grm. (gr.  $\frac{1}{2}$ ) may be administered two or three times during the day, or 0·03 grm. (gr.  $\frac{1}{2}$ ) at night. The single dose for subcutaneous injections is 0·015 to 0·03 grm. (gr.  $\frac{1}{2}$ ).—(G. Merck, Darmstadt, *Annual Report*, 1898, p. 57.)

Dionin has been employed by Dr. H. Higier, of Warsaw, Poland (*Therap. Beil. d. Deut. Med. Woch.*, xxv, 75), in forty-nine various cases with a view to testing its efficiency as a sedative. He used it almost exclusively in chronic severe cases in which the cough was exceedingly troublesome both night and day, and in which the usual narcotics had been ineffectively employed. With the exception of two cases of bronchial asthma, the majority of the cases treated were of advanced tuberculosis of the lungs, with or without affected larynx or pleura, the balance being chronic cases of bronchitis with pulmonary emphysema.

In almost every case of tuberculosis the excellent action of the dionin was recognised. A number of the patients demanded a renewal of the remedy, as it afforded them quiet prolonged sleep, suspended the troublesome cough, diminished the dyspnoea, and rendered expectoration easier.

The most remarkable effects were observed in the very annoying cough accompanying laryngeal or pulmonary phthisis.

The action of dionin was less prompt in emphysema, so far as permanence of effect was concerned, though most patients preferred it to other remedies.

No results whatever were obtained in bronchial asthma, in which affection it was given in the ordinary doses at first, and later on in even double doses.



So far as unpleasant symptoms are concerned, such as accompany the use of morphine or its derivatives, only two patients (one a woman in the seventh month of pregnancy) complained of increased perspiration, nausea, and partial loss of sensation.

Of disagreeable effects on the gastro-intestinal tract not one complaint was made.

In three cases changes were made thrice from dionin to morphine, codeine, and heroin, but in every case the patient believed the most benefit to be derived from dionin, though no suggestion as to the changes had been made.

Dionin was given in doses like those of codeine—about  $\frac{1}{4}$  grain three times a day—in solution, syrup, powder, or pill.—(W. Essex Wynter, M.D., *Treatment*, April, 1900, p. 98.)

**Digitalis.**—In the *Practitioner*, April, 1900, there is a paper entitled "Some Remarks upon Digitalis Treatment in Chronic Disorders of the Circulation, and especially on the Continuous Use of Digitalis," by J. Groedel, M.D., Bad Nauheim. The interesting part of this communication is the discussion of the question raised—"Is it advisable, and when is it advisable, and even necessary, to permit digitalis to be taken for a considerable period without interruption?" The method of giving digitalis uninterruptedly, which is held by many to be inadmissible, has been practised by him in particular cases for years, and in this position he does not seem to stand alone. In the majority of chronic heart diseases there comes a time, he holds, when we can no longer succeed in producing a lasting compensation by means of repose and dietetic rules, baths and gymnastics, or even by a short course of medicine. Of these measures, he places physical and dietetic means of treatment in the front rank. If these alone should fail he turns to drugs, and above all, to digitalis, using it with care, very sparingly, and at as long intervals as possible. It is only at the stage when this method becomes comparatively a failure that he has recourse to continuous digitalis treatment, which, when all other treatment was useless, has produced in many cases a satisfactory result.

A certain stability in the action of the diseased organ returns, so that for a considerable time the patient is able to lead a comparatively easy life, and take up his occupations once again, even if only in a more restricted way, without suffering the constant fluctuations between good health and serious illness. Naturally, with this treatment as with every other, there comes a time when the heart-muscle and heart-nerves will no longer respond to the stimulant action of the remedy, which ceases to have any effect.

But, as far as can be judged by comparison between individuals who are apparently in the same condition, this moment comes no sooner in these cases than in those which have undergone the customary treatment of digitalis given periodically in larger doses. And even if the *exitus letalis* can be somewhat delayed in this way, is it altogether a gain? He holds it to be a far more grateful task for the physician to make the patient's life bearable as long as possible rather than to prolong it with perpetual suffering.

There follows a discussion of the objections which may be raised to the continuous use of digitalis over long periods. The chief of these is the cumulative action of the drug sometimes observed. In this connection, he believes that we have less to fear from cumulative effects than we often suppose; besides, we have special criteria by which to avoid them.

He has only rarely seen cases of violent toxic symptoms resulting from cumulative effects, which, however, never lasted long, and did no permanent harm. More frequently has been observed, even after small doses, the slighter secondary effects of digitalis, such as nausea or flashes before the eyes. But these symptoms have nothing to do with the effect of digitalis on the heart, and soon disappear when the remedy is left off. Nevertheless, they must always be taken as a warning to be specially careful. This must still more be the case when the pulse became irregular after only small doses, showing that the direct effect upon the heart is not a normal one. In such

cases the use of digitalis, even in small doses and for a short time, is absolutely contra-indicated.

Another and far more important way of avoiding the dangers of cumulative effects is by observing diuresis—suspending the remedy for a time if no diuretic action is apparent within a few days of beginning the administration. If, on the other hand, diuresis is distinct, there is little fear of cumulative effects. He generally gives one to two grains of the digitalis leaves daily, but the tincture or other preparations may be given in corresponding proportion.

The other main objection raised to the use of digitalis in this way is that the long use of the drug may produce a habit as in the case of morphia. This does not seem a serious objection. In the case of a man suffering from chronic heart disease, if digitalis has become indispensable to him, it is not because he has grown accustomed to it, but because his condition requires it.

The closing remarks in the paper refer to various groups of heart disease and disorders of the circulation in which the treatment under certain circumstances may be adopted :—

1. Valvular disease of the heart, including sometimes even aortic disease.
2. Heart disease, the result of over-exertion.
3. Slight fatty degeneration of the heart-muscle, resulting, for instance, from alcohol or tobacco (Eichhorst).
4. Arterio-sclerosis associated with heart disease and chronic nephritis—in the later stages when the heart is failing and the blood-tension has begun to fall.

On the other hand, in purely nervous disorders of the heart, such as functional tachycardia or Graves's disease, the protracted employment of digitalis is useless.

### *Books, Pamphlets, &c., Received.*

- Contributions from the William Pepper Laboratory of Clinical Medicine (University of Pennsylvania). Philadelphia, 1900.
- The Pathogenesis and Treatment of Cancer without Operation, by Robert Bell, M.D. Glasgow : Robert Love. 1900.
- The Goulstonian Lectures on the Typhoid Bacillus and Typhoid Fever, by P. Horton Smith, M.A., M.D. London : J. & A. Churchill. 1900. (2s. 6d.)
- Dermatologische Zeitschrift herausgegeben, von Dr. O. Lassar. Band VII, Hft. 2 und 3. Berlin : S. Karger. 1900. (Obtainable from F. Bauermeister, Glasgow.)
- A Handbook of the Diseases of the Eye and their Treatment, by Henry R. Swanzy, A.M., M.B., F.R.C.S.I. Seventh Edition, with Illustrations. London : H. K. Lewis. 1900. (12s. 6d.)
- Progressive Medicine, edited by Hobart Amory Hare, M.D. Vol. II (June, 1900). London : Henry Kimpton. 1900.
- Transactions of the Sixth International Otological Congress, London, August, 1899, edited by E. Cresswell Baber. London : The Southern Publishing Co., Limited. 1900.
- Illustrated Price List of Bacteriological Apparatus Manufactured and Sold by John J. Griffin & Sons, Limited. London, 1900.

**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDING 18TH AUGUST, 1900.**

	WEEK ENDING			
	July 28.	August 4.	August 11.	August 18.
Mean temperature, . . .	62·2°	58·8°	55·4°	63·1°
Mean range of temperature between day and night, . .	14·5°	14·5°	13 0°	20·3°
Number of days on which rain fell, . . . . .	3	6	5	0
Amount of rainfall, . . ins.	0·52	0·68	2·14	0·0
Deaths registered, . . . .	270	279	254	273
Death-rates, . . . . .	18·9	19·5	17·8	19·1
Zymotic death-rates, . . .	4·1	4·8	5·1	4·7
Pulmonary death-rates, . .	4·1	4·1	3·0	3·8
<b>DEATHS—</b>				
Under 1 year, . . . . .	67	87	83	80
60 years and upwards, . .	39	35	35	41
<b>DEATHS FROM—</b>				
Small-pox, . . . . .	2	2	1	...
Measles, . . . . .	18	14	8	13
Scarlet fever, . . . . .	5	...	2	4
Diphtheria, . . . . .	...	1	.	1
Whooping-cough, . . . .	8	9	19	13
Fever, . . . . .	3	6	4	5
Diarrhoea, . . . . .	23	37	39	31
Croup and laryngitis, . .	1	1	...	...
Bronchitis, pneumonia, and pleurisy, . . . . .	34	37	25	39
<b>CASES REPORTED—</b>				
Small-pox, . . . . .	13	16	3	...
Diphtheria and membranous croup, . . . . .	5	2	6	11
Erysipelas, . . . . .	20	18	16	22
Scarlet fever, . . . . .	41	71	80	86
Typhus fever, . . . . .	...	...	...	...
Enteric fever, . . . . .	22	14	21	33
Continued fever, . . . .	...	...	...	...
Puerperal fever, . . . .	1	1	1	...
Measles,* . . . . .	89	91	69	76

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 27th August, 1900.

THE  
GLASGOW MEDICAL JOURNAL.

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No. IV. OCTOBER, 1900.

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ORIGINAL ARTICLES.

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NOTE ON THE MINUTE-BOOK (VOL. II) OF AN EARLY  
GLASGOW MEDICO-CHIRURGICAL SOCIETY.

By WILLIAM WHITELAW, M.D., D.P.H.,  
Fellow of the Faculty of Physicians and Surgeons of Glasgow.

"All that we now deem of antiquity at one time were new, and what we now defend by examples will, on a future day, stand as precedents."—TACITUS.

THE perusal of the note contributed by Dr. Middleton in the November (1899) number of the *Journal*, led me to take a second look at an old minute-book of a medical society picked up at a bookstall in Kirkintilloch. It quickly afforded evidence that it is the *second* volume of the early Glasgow Medico-Chirurgical Society, mentioned by Dr. Middleton as not recovered.

The book is an octavo without boards, these, with the index that the secretary was bound by special rule to put at the end of it, having been torn off by some vandal, and consists of 318 pages, with caligraphy in three different hands. The minutes begin one month after the last minute of Vol. I, viz., at 12th May, 1825, and terminate on 26th March, 1829.

As Dr. Middleton remarks about Vol. I, the minutes in Vol. II contain a summary of the papers read, with the discussions thereon, and also of the periodical "conversation

nights." The various essays survey man and woman from the crown of the head to the sole of the foot, not omitting the influences of human environment, on which, in the present scientific days of evolution, so much stress is laid. A humorous flavour, not always conscious, permeates some sentences of the secretary. The Society was either not large, or the speaking was of the circumtabular kind, the same half-dozen names generally cropping up. The annual meeting of the Society was held on 12th May, 1825, and the following office-bearers were elected, according to a standing resolution, by seniority:—Mr. Stirling, president; Dr. Macfarlane, vice-president; J. Campbell, secretary and treasurer. This mode of election was changed to that by ballot in the following year, when Dr. Macfarlane was made president, Mr. Davidson, vice-president, and Mr. Weir, secretary and treasurer. Dr. Macfarlane is a conspicuous personality in this volume; and, as a teacher of mine (Practice of Physic Class, Glasgow University, session 1859-60), and author of *Clinical Reports*, I follow his lucubrations and pithy comments with special interest. His students loved him, and he loved them. Many years ago a medical writer (*Scarificator*, Glasgow, 1st February, 1858) described him truly as "John Macfarlane, with his large experience, and honest face—plain, substantial, and instructive."

At this meeting in May, 1825, Mr. Lightbody read a short essay upon "Rheumatism." Dr. Macfarlane mentioned that the practice in the Royal Infirmary was to give a solution of sulphate of magnesia and tartar emetic, "by which even the most urgent cases have been subdued, seldom requiring the aid of the lancet." "Several cases were stated by the members, illustrative of the effects of music and other sudden violent mental excitement in removing for a time every trace of the disorder." It may be remembered in this connection that when Mr. Pickwick was laid up with an attack of rheumatism, Sam Weller cheered him and made his spirits elastic with a recital of the "Parish Clerk, a Tale of True Love." No theory of the cause of rheumatism, lactic acid, germ, or nervous, is given by anyone; but Mr. Weir expressed an opinion that "acute rheumatism is an inflammatory affection of the joints, and that chronic rheumatism is an affection, partly inflammatory and partly spasmodic, of the muscles, fasciæ, and tendons." An animated discussion followed, which was renewed at a meeting so late as 14th September, 1826. Mr. Weir gets the best of the argument, his line of reasoning being that the two diseases are distinct, that there is not the same connection between them as subsists

between acute and chronic hepatitis, or acute and chronic ophthalmia; that, in these last, the seat of the two diseases is the same—in rheumatism it is quite different; that the effect of acute rheumatism is to produce a thickening and enlargement of the part affected, whereas chronic rheumatism produces a wasting and diminution of the diseased part; that persons labouring under the chronic kind are rarely, if ever, attacked with the acute, and that persons who had frequent attacks of the latter during a long life were never troubled with the former; that while acute hepatitis was apt to terminate in chronic hepatitis, and the same might be said of ophthalmia (*sic*), acute rheumatism could never terminate in chronic rheumatism, the seat of the two diseases being essentially different. Mr. Weir allowed that in the affection of the joints called acute rheumatism, when the high fever and other inflammatory symptoms went off, there often remained an enlargement and pain of the part affected, continuing occasionally for a long time, and frequently called “chronic,” but that this was certainly a very different complaint from that severe affection of the pectoral and intercostal muscles, most properly denominated chronic rheumatism. One member corroborated by saying that “in the muscular affection, even when attended with considerable pyrexia, the blood did not exhibit the buffy coat, while in the acute affection of the joints this appearance was never absent.”

Whatever pathological view may be adopted, the *clientele* of every physician and the details of “incurable homes” afford considerable proof of Mr. Weir’s original and far-seeing survey of rheumatism.

That gentleman was not so successful at another meeting, when he read a paper on “Typhus,” maintaining that it had no personal infecting power—all the danger was in the depreciation of the surrounding atmosphere, and in the quantity and quality of the people’s food. A keen discussion followed this paper, and the remarks of members, terse and strong, occupy three pages of the minute-book, the secretary diplomatically summing up thus—“The discussion was carried on with considerable spirit, and although all the members differed in opinion from the essayist, they in general gave him credit for the attention he had bestowed on the subject.” This was as high praise as that of the church beadle who, when pleased with a preacher, would remark—“That was a gran’ sermon;” and, when not satisfied, he would say—“Ye had a gran’ text.”

On one of the “conversation nights” the whole evening was

devoted to the consideration of what seems to have been an ischio-rectal abscess ending in blind external fistula. Mr. Hosie stated that "the patient had suffered from fistula in ano for ten months, and had been entirely neglected in the early period of the disease. The opening is situated within three quarters of an inch of the anus, the depth varying, during the six months that the case has been under the reporter's care, from half an inch to six inches; and, at no time, by the most careful examination, could the sinus be discovered to be nearer the rectum than one inch. There is considerable induration in the surrounding parts, and a very small opening. The patient's health has suffered much of late, and the extent of the fistula has proportionally increased. The reporter contended that the restorative process was interrupted and destroyed in consequence of the peculiar situation of the parts affected; that the action of the sphincter muscle and the ordinary function of the rectum destroyed the granulations, and prevented that adhesion which, in other situations, would readily take place; and he proposed an operation as the only means left for obviating these effects and ensuring a permanent cure." As was to be expected, after such a minute description of the disease, with the belated suggestion of surgical interference, "much keen discussion ensued, during which it was frequently urged that the case seemed essentially different from fistula in ano, in so far that the intestine has never been affected, that it appeared to have had its origin from simple abscess in the cellular membrane, which, being allowed to form an imperfect opening for itself, the contents were not discharged—thereby increasing the inflammation and induration of the surrounding cellular texture, and requiring only a large external opening and appropriate local treatment, with due attention to the state of the constitution." To this sensible, if somewhat verbose, verdict, no reply from Mr. Hosie is reported.

Glancing at the index of any modern manual on public health, it will be noticed that much importance is attached to external conditions and influences, such as air, water, hospitals and other buildings, closets, ashpits, sewage, germs, and general environment. The late Sir John Simon, by his emphatic description and denunciation of "filth diseases," gave great importance to these and similar departments of sanitation. Earth, air, fire, and water are certainly good old cardinal elements, but the personal element should never be absent from considerations regarding the preservation of health. Attention to personal health, and individual concern

for the whole community (James Hinton named this "Altruism"), would ensure cleanliness and healthful habits in the home—extending to the tenement, the close, the street, and the whole district. It is interesting, therefore, to find a hygienic essay read before this old Medico-Chirurgical Society, philosophical in its tone, and eminently practical for the time in which it was delivered. By inference, the author would not have objected to the continued influx of country people into Glasgow, but would have considered it a blessing, its tendency being to reduce the dangers of intermarrying and breeding in and in.

"*31st August, 1826.*—Mr. Davidson read an essay on 'Health and Longevity.' At the commencement he gave a general view of the physical mortality of man, deduced from the structural alteration which uniformly and slowly takes place, showing the absurdity of attempting to prolong life to an indefinite period, and then assumed that the following principles were essential for absolute health, and consequent longevity:—(1) Pure atmospheric air, (2) nutritious animal and vegetable food, (3) laborious exercise, (4) proper clothing. He accounted for the fact of instances of longevity occurring in crowded and ill-ventilated situations by the principle of a strong constitution bearing up against an injurious combination of circumstances—just as some men live to a good old age though they have been addicted to the use of alcohol for several generations! He maintained that, in general, either animal or vegetable food was sufficient to nourish the body; that laborious exercise necessarily prevented obesity; and that clothing ought not to be more than what is sufficient to prevent the injurious effects of cold. That man ought to live in an uncivilised state in everything but the cultivation of his moral and intellectual faculties, which would become proportionally more vigorous, as they were vegetating in a soil naturally rich and uncontaminated; that the inhabitants of large towns degenerate their offspring very rapidly, and that there were no indigenous families in Glasgow who have propagated beyond the fourth or fifth generation. The essayist further illustrated the position that families intermarrying with one another increase and concentrate hereditary diseases, supposing the primogenitor of some families to be affected with scrofula. Here it was evident that unless the tendency to scrofula be neutralised by an alliance with families who have no such predisposition, every new birth will have double the malignity of that where the father or mother only is affected; and that were it not for the salutary provision of



nature that when the human race becomes degenerated to a certain extent the function of generation ceases to operate, the world long ere this period would have been peopled with deformity and idiotism, and man would have been degraded in the scale of intellect below the sagacity of many of the lower animals. In savage life this was prevented by the nature of man's habits and exposure to various and trying vicissitudes, which generally proved fatal to the weak and delicate portion of their progeny, leaving only the robust to propagate the species. In like manner, among ourselves, small-pox, measles, and other epidemics act upon the same principle, and sweep from the field multitudes of delicate children."

Had Mr. Davidson been living now he would have spoken of the "survival of the fittest," the principle that applies to animals as well as plants.

"The essayist expressed also his opinion that vaccination and medical practice had considerable influence in perpetuating hereditary diseases, inasmuch as they tended to prolong the lives of those labouring under them, and concluded his observations by recommending Scotland as a land to live in, where we ought to expose ourselves freely to the open air, live plainly, dress lightly, and drink sparingly."

"The members in general expressed their approbation of the manner in which the subject had been treated, and did not differ materially from any of the points laid down. Some discussion took place as to the effect of situation and mode of living in inducing and aggravating different diseases. Most of the members seemed to think that these had not such an effect in shortening life as was generally supposed, provided the constitution was originally sound—a robust frame being capable of resisting very great, and apparently injurious, changes in this respect."

It would take too much space to enumerate the titles of all the essays and conversations referred to in the volume. The difficulties of midwifery, and the use of the ergot of rye—with the inevitable hour-glass reference—bulk largely. Mr. Wilson, an honoured name in medical Glasgow, was a warrior in this department. At one meeting he delighted his hearers with a new method of reducing an inverted uterus. Other means having failed, "one finger was pressed firmly against the most projecting part, then a second, a third, and a fourth, and the tumour pushed upwards, when, after fifteen minutes' exertion, the contraction relapsed, and the uterus was fairly replaced, with the whole hand in its cavity. The hand was gradually

withdrawn, an anodyne was given, and the recovery was rather slow, but ultimately complete."

A paper on "Puerperal Fever," read by Mr. Thomson, indicates, along with the members' comments, the dogmatic, antiphlogistic views of treatment that prevailed at the time. Reading now a book such as Dr. Jellett's *Short Practice of Midwifery*, one wonders if in the next seventy years the study of midwifery can make such a beneficial stride as it has done in the past period. Lord Bacon's oft-quoted remark that the labour of medicine had been "more in a circle than in progression," cannot apply in the modern days of improved diagnosis, useful appliances, anæsthetics, and antiseptics.

In looking through the volume, the dosage of some medicines is worthy of notice. Mr. Stirling read a paper on "Dysentery." "The principal treatment was one scruple doses of calomel, repeated according to the urgency of symptoms, either uncombined or with minute doses of opium." A majority of the members objected to this heroic administration of mercury. On another occasion Mr. Davidson informed the Society that he had found considerable benefit from the use of a combination of opium and croton oil in certain spasmodic affections of the stomach, when there existed most severe pain and constant vomiting, but without purging. He gave a pill composed of 5 grains of powdered opium and 4 drops of croton oil. The members were not astonished with this powerful remedy, but deemed that "the treatment might do when calomel and opium failed, and they considered themselves indebted to Mr. Davidson for the information." The modern tendency to limit the dose of opium administered in such a disease as dysentery will be seen on comparing the dose in the current copy of Squire's *Companion to the Pharmacopœia* with the late Professor Christison's *Dispensatory*—30 grains in twenty-four hours (*Autobiography*, p. 380).

A reference to Christison leads to mentioning that, in these old days, Edinburgh had not a monopoly of medical squabbles. On 1st September, 1825, Mr. Campbell, secretary, sent in his resignation as a member of the Society; and, on the 29th of the same month, his successor in office intimated that "he had again written to Mr. Campbell, late member of this Society, and had a personal interview with him regarding the regulation and minute-books in his possession, and that he promised to transmit them in a few days. This period having elapsed, and the promise remained unfulfilled, it was unanimously agreed that the secretary be enjoined again to write to him an official letter, reprobatng his conduct, and demanding the

immediate delivery of all the Society's documents in his possession." On 31st October, "the secretary announced that two days ago Mr. Campbell had called and left the old minute-book, promising to hand in the new one before this meeting, after he had inserted in it a few loose minutes connected with the period of his officiating as secretary." "The Society was astonished at Mr. Campbell's delay in complying with their fair and reasonable demands, and again enjoined the secretary to send the officer to him every day until the book and other documents were delivered up." On 27th October the secretary laid the minute-books<sup>1</sup> on the table, "having been at last successful in obtaining them from Mr. Campbell."

On 24th November, 1825, it was proposed and seconded that "as the apartment in which the Society at present meets is cold, and in other respects uncomfortable, application should be made to the Faculty of Physicians and Surgeons for permission to meet either in their hall or in one of the rooms connected with it," which, after some discussion, was ordered to lie on the table till next meeting. At the following meeting the proposal was negatived by a majority. This need not be wondered at, seeing that an active member, Mr. Hosie, was first president of the "wee" Faculty of Medicine that had its birth in the same Cowpock Institution Hall.<sup>2</sup>

There is an entire absence of bibulosity at all the meetings of the Society—no coffee, no annual dinner, no social meeting whatever; all work and no play. There were rigid rules, also, one being that a member failing to attend with, or send in, a promised essay, be fined "unless he had been sick for three days previously." Fines were also imposed upon members "for leaving the meeting before the regular business was finished."

*Au revoir!* good old doctors! your valued minute-book will keep company with Vol. I.

<sup>1</sup> Including the volume now resurrected from dust and oblivion. In the language of Burke—What shadows we are; what shadows we pursue!

<sup>2</sup> See Dr. Duncan's chatty, interesting volume, *Memorials of the Faculty of Physicians and Surgeons of Glasgow*, p. 195.

**TWO EXAMPLES IN MEN OF SEVERE AND PROLONGED ATTACKS OF ASTHMA, ASSOCIATED WITH, AND APPARENTLY DEPENDENT UPON, THE PRESENCE OF NASAL POLYPI, EXTIRPATION OF WHICH RESULTED IN COMPLETE IMMUNITY FROM ASTHMATIC SYMPTOMS.<sup>1</sup>**

BY WALKER DOWNIE, M.B., F.F.P.S.G.,  
Lecturer on Diseases of the Nose and Throat, Glasgow University.

CASE I.—John B., aged 41, was brought to me by his medical adviser in December, 1895. The patient then complained of asthmatic attacks, which, during the previous eight months, had become increasingly severe and prolonged. The attacks at first came on at night shortly after lying down in bed, when the difficulty in breathing not only prevented him from sleeping, but compelled him to sit up, or even get out of bed. When he assumed the upright position, the spasm became less severe, only to return, however, when he lay down again. Later on, even sitting up gave no relief, and walking quickly would induce a spasm. Between July and December the attacks had been very severe, and during the four weeks previous to the first visit he had been unable to attend to business on account of the breathlessness and exhaustion—the asthma being then practically continuous day and night. On examination, his sense of smell was absent in the left naris and deficient in the right, and while he could breathe through the right naris with slight effort, the left naris was completely blocked. The right naris contained numerous small mucous polypi, occupying the superior and middle meatuses. The left naris was wholly occupied by several large mucous polypi. These new growths were removed at intervals, as he felt able, by snare and forceps, with the result that he could breathe freely through both nares, and, along with this improvement, the asthmatic attacks became less severe. In June, 1896, he took a voyage to the Baltic. In September he called, and informed me that during the voyage, and since his return, he had had asthmatic attacks much as formerly. Mucous polypi were again found in each naris, and these were removed, and the surfaces from which they sprang were freely cauterised. Asthmatic attacks still returned, but at much longer intervals

<sup>1</sup> Paper read and cases shown at a meeting of the Glasgow Medico-Chirurgical Society, 11th May, 1900.

and with diminishing severity, till March, three months after the nares were thoroughly cleared. Since that date (March, 1897) till now, he has not had a single attack of asthma, nor, as he says, has he had the slightest approach to an attack. Formerly he rarely worked a full week; he was unable to go out in the mornings being so exhausted from the continuous respiratory difficulty and from want of sleep, but during the past three and a half years he has been regularly at work, not having been absent from it on a single occasion through ill-health.

CASE II.—Hugh S., aged 42, was first seen by me in March, 1898. For many years he had been subject to frequent attacks of sore throat, for the treatment of which caustic solutions were applied by his doctor. During those years he had frequently spoken of a stiffness in his nose, but this organ had never been examined. Early in 1895 he first suffered from asthma, and from this time on each attack of inflammation of the throat was followed by asthma. On many occasions these attacks continued night and day for weeks, and more than once, while exhausted from these long attacks, and while gasping for breath, he was supposed to be dying. From 1895 to 1898 he was frequently off work for six, eight, and ten weeks at a time, entirely on account of the severe and prolonged attacks of asthma. On examination, he was found to have difficulty in breathing through each naris, and his sense of smell was absent on both sides. There was a general hypertrophy of the nasal mucosa, with several large mucous polypi in both nares. These were removed at several sittings, along with the anterior half of each middle turbinal bone, during March and April, and the surfaces from which the polypi sprang were freely seared by means of the electric cautery.

The extirpation of the growths was followed by immediate immunity from the attacks of asthma; but four months later (August, 1898) he contracted whooping-cough. This affection was apparently very severe, as during a paroxysm of coughing he on several occasions lost consciousness. While suffering from whooping-cough, he had frequent slight attacks of asthma during the early part of the night.

As he recovered from whooping-cough the asthmatic attacks disappeared, and he remained entirely free from asthma for fifteen months. Early this year he again began to wheeze on lying down at night, and he came again to the Western Infirmary, where a small mucous polypus was found in his left naris, springing from the posterior aspect of the middle

turbinal, and projecting towards the naso-pharynx. This was removed with the cautery, and he has since had complete relief from all asthmatic symptoms.

*Remarks.*—I have now treated many cases of asthma dependent on the presence of nasal mucous polypi and of turbinal hypertrophies. The majority of those cases have been in women, in whom some neurotic tendency might be suspected of playing an important part in the production or aggravation of the symptoms. But here we have two healthy, vigorous men, to whom absence from work meant pecuniary loss, and who, over a series of years, had severe and prolonged attacks of asthma of the regular wheezing type, which is commonly associated with bronchial affections, and so severe as to necessitate confinement to bed and the use of many active remedies.

In both cases the nares contained many new growths, and in both cases the complete extirpation of the polypi not only gave relief, but has been followed by complete immunity from the distressing ailment.

I believe that, in the majority of cases of bronchial asthma complicated with the presence of nasal mucous polypi, if the asthma is not relieved by the removal of the new growths, it is because they have not been completely removed. In the first case, the early operations, which were incomplete, gave but slight relief; and, in the second, a tendency to asthma supervened on the reappearance of polypi.

About thirty years ago, Voltolini first drew attention to the dependence of some cases of bronchial asthma upon nasal lesions, he having cured a case by the removal of polypi from the nose. His observations were supported by several writers in the medical press at the time, but the importance of the association between nasal disease and asthma was not generally recognised. Many physicians now refuse to believe that any case of asthma is excited by, or dependent upon, an intranasal lesion. In 1886, Bosworth, of New York, stated that in all the cases of asthma which he had seen, there existed an intranasal lesion. The opinion thus expressed by this eminent specialist, however, is not supported by specialists generally.

The majority of cases of asthma seen by a rhinologist have usually some very evident intranasal lesion, so that a specialist is not qualified to say in what proportion of cases of asthma the condition is the result of an intranasal abnormality. But, in my opinion, there are many cases of what is described as pure bronchial asthma in which the exciting cause lies unsuspected within the nares.

**CASE OF PROBABLE ADDISON'S DISEASE ASSOCIATED WITH LEUCODERMIA AND TUBERCULOSIS.<sup>1</sup>**

By R. BARCLAY NESS, M.A., M.B.,

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C. L., a young woman, aged 22 years, was admitted into the Western Infirmary under the care of Sir William T. Gairdner on 25th January, 1900.

The patient was affected with a peculiar brown pigmentation of the skin, associated with pale, almost white, patches. She was anæmic, complained of general weakness and irregular menstruation. She had cough, and there was evidence of disease at the apex of the left lung, probably of a tubercular character.

The interest of the case lies in the question whether or not it can be one of Addison's disease associated with leucoderma.

The following are the details of the case from the report on admission:—

The patient is of very slight build, anæmic, and rather thin, weighing on admission only 5 stones. She said she had never been robust, but had until recently enjoyed fairly good health. In childhood the only diseases she suffered from were measles and whooping-cough.

Menstruation for the last two or three years had been irregular, the intervals varying from six weeks to two months. This function had also been frequently attended by pain in the back. This pain had often, during the last nine months, occurred at the times of her "missed periods." The last menstrual period was in April, 1899, and she thought the change in the colour of the skin began about that time, although she admitted that at the beginning she did not pay much attention to it.

She worked as a tailoress up till July, 1899, but from that time she has been unfit for work, without, however, having any definite ailment beyond a little cough. In fact, she attributed her general weakness to the work being "too much for her." Sometimes she was confined to bed for a day at a time, but only, she said, because she felt tired. She admits, however, occasional attacks of sickness and vomiting. At

<sup>1</sup> Shown for Sir William T. Gairdner at a meeting of the Glasgow Medico-Chirurgical Society held on 4th May, 1900.







FIG. 1.

Showing patches of leucodermia on the arms, thorax, and abdomen,  
and, to a less extent, on the face.



FIG. 2.

Showing patches of leucodermia on the back.



FIG. 1.

Showing patches of leucodermia on the arms, thorax, and abdomen, and, to a less extent, on the face.



**FIG. 2.**

**Showing patches of leucodermia on the back.**



times she has also suffered from severe pain, which she localises at a point slightly above and to the left of the umbilicus. Since the beginning of the present year she has felt weaker and less able to do anything, but still without any local trouble, except that the cough to which she has been liable since last July had, in the week or two before admission, become aggravated. It was associated for a few weeks before admission with profuse perspiration and loss of flesh.

These symptoms, in the light of the family history, were very suggestive. Though the father is alive and healthy, the mother died three years ago, at the age of 35 years, of acute tuberculosis. Of a family of eleven, five died in infancy or childhood; an elder sister is delicate; the others, so far as the patient knows, are in good health.

With regard to the pigmentation of the skin, Sir William Gairdner made the following note on 31st January:—

“In this case there is, apart from the general symptoms, a very peculiar colouration of the skin, more or less visible all over the body as well as the face, and perhaps more notable in some respects on the body (Figs. 1 and 2). On the face it presents generally the appearance of an extremely dark complexional pigmentation, which, as the patient has obviously had nearly black hair and hazel-coloured eyes, might conceivably be a normal fact, were it not that she has very distinctly the impression that it is a comparatively recent occurrence, coinciding in time and in its progress with her deteriorated health.

“It is evident that the dark pigment is not quite generalised. On the face in particular there is an area, proceeding from the upper lip and right angle of the mouth, of an inch square or less, in which the colouration is absent or very much lighter, so much so as to form a patch on the general deeper pigmentation; and, besides this, there is another area behind the brow, corresponding with what might be supposed to be shaded by the hair, but not accurately corresponding with this, of a much lighter pigmentation; and, in respect of the hair itself, it is very notable that while it is somewhat thin over the vertex, it maintains generally its black colour, while at the front, corresponding with the cutaneous patch above mentioned, there are numerous grey hairs, and even on the right side a number quite decolourised, giving more than the aspect of the senile white hairs in patches.

“A similar distribution of white hair, but not perhaps so strongly marked, is seen towards the occiput, far back, but

in the main covering of hair towards the vertex there is no such alteration.

"Patient herself says positively that all these changes have occurred within the last nine months. Taking now the body, and, in the first instance, the right arm and corresponding side of the thorax, there are numerous leucodermatous patches in the midst of a generally heightened pigmentation, it being impossible now to determine whether the light patches correspond with the original tint of skin, or whether they are morbidly devoid of pigment; the patient's own impression is that the leucoderma and the dark pigmentation are both of them equally departures from the normal aspect of her skin, which was that of a brunette, but not nearly so dark as now.

"There is nothing else than these facts to show any morbid change; there is no desquamation, no abnormal vascularity or change in structure. The change is one in the disposition of pigment only, which, again, is entirely a question of degree, being of a kind that corresponds with the apparently natural complexion.

"Having this in view, it is rather remarkable that the nipples, which are small and evidently virgin, present not the slightest trace of an areola; in fact, taking for an inch around, they seem to be included each in a leucodermatous patch, as there is even a faintly marked line of demarcation of a patch of an inch and a half diameter, including each nipple.

"On front of right arm the patches are very irregular (many nearly circular, others of very different shape), and it may be taken as a general rule that where a patch exists of tolerably well defined character in the midst of a deeply pigmented integument, the depth of pigment increases up to the edge of the patch, so as to show the latter in very strong contrast. On the right fore-arm interspersed white patches and pigmented skin proceed quite down to wrist, while the palmar aspect of hand is for the most part, if not entirely, either leucodermatous or normal, and this is more striking in thumb and forefinger, by the dorsal, and even lateral, aspects presenting small patches of leucoderma amid the pigmentation.

"It is also worth remark that each finger, though generally, like the back of hand, inclining to deep pigmentation, has a mainly leucodermatous extremity corresponding generally with the distal phalanges, but not perhaps quite exactly marked off.

"The nails are, on the whole, unduly curved, but not rigid

or unduly marked. A similar description applies to the left arm and hand, only that leucodermatous patches are fewer. On the whole dorsal aspect leucodermatous patches are interspersed among deeper pigmentation. One of the largest extends from anterior superior spine of ilium nearly to dorsal spine, measuring, perhaps, 5 inches by 7 inches, of irregular form, but not otherwise differing from the smaller patches.

"On the abdomen there are also patches, but less, on the whole, than on the thorax or limbs. It is also noted that there is no relative darkening or lightening of the general tint towards the pubes.

"Leucodermatous patches are also abundant on the thighs, less so on the lower part of the legs; and exist also on the feet, though not so marked as on the hands. A similar condition exists on the back (Fig. 2)."

The other facts, with regard to physical examination, are these—

With regard to the blood, which was examined on 4th February, it was found to contain hæmoglobin to the extent of 58 per cent, while no alteration was observed either in the number or character of the corpuscles.

The first observations showed temperature to have a maximum of 99·4° F.; pulse, 100; respirations, 28 to 34.

Examination of the lungs showed that the left apex was slightly affected, probably with tubercular disease. During her residence in hospital the signs became more marked, and pointed to excavation taking place, and the probable involvement also of the right apex. These changes were accompanied by elevated temperatures, the highest of which was 102·6°; of late they have again subsided to about 100° F.

The heart presented no abnormality.

On examination of the abdomen, the hepatic dulness was found to be unusually small, measuring only about an inch in the vertical nipple line, the lower border only reaching to an inch and a half above the costal margin. The splenic dulness was not abnormal. The abdomen could be freely handled without any evidence of tenderness anywhere.

The urine was moderate in quantity, neutral in reaction, and contained neither albumen, blood, or sugar.

With these facts of the case before us, there seem to be two possible views which can be taken regarding the skin condition.

It may be a case of leucodermia pure and simple, or it may be a case of Addison's disease associated with leucodermia,



always admitting, whichever view is taken, the tubercular condition of the lungs.

Undoubtedly, the skin condition answers in all respects to the condition known as leucoderma or vitiligo. But there is, in addition, a general bronzing of the skin apart from the presence of leucoderma. This is evident in the face, neck, hands, groins, to some extent in the axillæ, distinctly so in the groins and genitals, but it must be conceded that there is no undue pigmentation of the nipples or the areolæ in the region of the umbilicus, or in the middle line between this and the pubes. There is some degree of general bronzing in the latter regions, but it is not present in excess. In the case of the nipples there is less than normal, because each is involved in a leucodermic patch. It should be mentioned, also, that there is no pigmentation of the furrows in the palms of the hands, nor is there any pigmentation of the mucous membrane of the mouth.

To some extent, then, there is present the general bronzing of Addison's disease, but the distribution of the pigmentation does not conform to the usual type, especially in connection with the presence of these leucodermic patches.

There is another important difference between leucoderma and Addison's disease in respect of subjective symptoms. In the former condition there are usually none. It is believed to be a tropho-neurosis, often appearing in patients who have had other nervous diseases, or who belong to a neurotic family, but there are no definite subjective symptoms to be associated with leucoderma itself, whereas in Addison's disease there is marked asthenia.

Now, in the present case, asthenia with distinct anæmia was certainly present to a marked extent at an early date. Further, we had, what is not uncommon in Addison's disease, a history of occasional attacks of sickness and vomiting. In putting forward the marked asthenia in support of the condition being the same as that described by Addison, it is not forgotten that the girl is suffering from phthisis, but the asthenia was present when the phthisical condition was only in the incipient stage, and, as far as her feelings go, although the tuberculous condition has made very considerable progress, the patient expresses herself as being much better, possibly the effect of treatment, and the expression of her own feelings corresponds with slight increase in weight.

In connection with the question of the association of leucoderma with Addison's disease, it is so true of this being so rarely associated with Addison's disease that, as a

rule, it is not referred to in ordinary text-books on medicine, such as that of Bristowe, Hilton Fagge, or Clifford Allbutt.

The writers in these text-books give the usual description with regard to the distribution of the pigment being in excess in exposed parts, such as the face, neck, hands, where the pigment is naturally more abundant, as in the axillæ, groins, areolæ of the nipples, or where there is undue pressure, as in the region of the waist and over the spine of the vertebræ, but there is no reference to the occurrence of leucodermia.

Some American works, such as that of Loomis and Thomson, as pointed out to me by Dr. J. Souttar M'Kendrick, make a very passing reference to the condition, though there is in this work a good plate illustrating the condition.

Now, this omission in English text-books on medicine is very remarkable, in view of the fact that no less an authority than Addison himself described the condition. In his monograph, entitled *On the Constitutional and Local Effects of Disease of the Suprarenal Capsules*, in which he gives notes of eleven cases, he refers, in his general description of the condition, to the fact that the deep pigmentation may be in patches, and in Case VI he specially notes this feature of the case. Further, he gives an admirable plate depicting the condition. There can therefore be no doubt about Addison's own view of the matter, but Sir Samuel Wilks, to whom is due the great credit of following up Addison's discovery, by gathering together all the cases he could, and in publishing the result of his work in *Guy's Hospital Reports* (1859-62-65), insists very strongly on the gradual blending of the deeply pigmented parts with the parts not so deeply pigmented. "Without, therefore," he says, "denying that the colour may sometimes occur in patches, we think we are correct in saying that all experience has hitherto shown that the discolouration has been uniform over the whole surface of the body."<sup>1</sup> He points out that the plate published in Addison's monograph was not taken from a case where a *post-mortem* examination was obtained.<sup>2</sup> But it should be noted that the important case (VI) described by Addison did come to a *post-mortem*, and it was found that the suprarenal capsules were diseased. In this case leucodermia was present, but unfortunately no sketch was taken of the appearance of the skin, so when another case of the same kind came under Addison's notice, which, he says, was practically identical in appearance to the one in which he had had the *post-mortem*, he had a

<sup>1</sup> *Guy's Hospital Reports*, third series, vol. v, p. 95.

<sup>2</sup> *Guy's Hospital Reports*, third series, vol. v, p. 94.

drawing made, and this he put in to represent the condition which was present in the first case (VI). Apart from the plate, however, this case is complete in itself, inasmuch as a full description is given. But Wilks persistently holds to his own view, so that, in Reynolds' *System of Medicine* (1879, vol. v, p. 359) there is found the following expression of his opinion:—

"In all these parts where the colour is darker it is gradually shaded off into the surrounding skin; in no case does it cease abruptly or is the pigmentation in circumscribed patches. To the inexperienced, such instances of discoloration in patches surrounded by pale skin are often regarded as cases of Addison's disease; but they are purely local affections and examples of leucoderma."

In spite of the position of Wilks, Gairdner has all along held to the view originally expressed by Addison. He has seen cases which suggest that Addison was possibly, in this respect, right after all.

He saw, in consultation, the same case as is described in Professor McCall Anderson's book on *Diseases of the Skin*, a case in which the diagnosis was proved to be correct by *post-mortem* examination.

This case was made the subject of some remarks by him in a discussion on Addison's disease, which followed a paper read by Dr. Greenhow, at the International Medical Congress held in London in 1881. These remarks are briefly recorded in the *Transactions*,<sup>1</sup> and are as follows:—

"I will proceed to refer to a case which has occurred to me in private practice, and which, though not involving any question of doctrine as discussed in Dr. Greenhow's elaborate and admirable paper, appeared at the time, and still appears, to present questions of fact, and of legitimate inference from the facts, which the present occasion seems an almost unique opportunity for answering. In this case, which was brought under my notice at an advanced period of the disease, I had no doubt or difficulty at all in recognising both the constitutional and the local symptoms of Addison's disease in a marked form, and the prognosis accordingly was exceedingly grave. In this case death took place, and a *post-mortem* examination showed, as regards the suprarenal capsules, exactly the appearance figured in Dr. Greenhow's drawings. The only point which gives to this case special importance

<sup>1</sup> *Transactions of the Seventh Session of the International Medical Congress*, 1881, vol. ii, p. 74.

is the fact that it was seen at a somewhat earlier period by an eminent dermatologist, Professor M'Call Anderson, who pronounced it a case of leucoderma, as it undoubtedly was, the peculiar pigmentation characteristic of Addison's disease being associated with well-marked circular leucodermatous patches on the wrists, hands, scrotum, &c., around which the peculiar darkening from pigment flowed, as it were, diffusely over the general surface, being specially dark immediately around the circular pale patches.

"Now, the question suggested to me by this case is, whether the association in question was purely accidental, or whether there is to be admitted a form of Addison's disease in which the pigment is so irregularly disposed; and as, in the earlier stages of the controversies in London about the disease, Dr. Wilks has been led to disown a case in Dr. Addison's own book, on the ground chiefly of the irregular type of the pigmentation, it appears to me not superfluous to bring up this detail in connection with the general question."

The case above referred to is recorded in full, with an account of the *post-mortem*, in Professor M'Call Anderson's treatise on *Diseases of the Skin* (second edition, p. 32), where the author endorses the opinion that leucoderma may be associated with Addison's disease in these words—"It is right to mention—and this fact is not sufficiently well known—that the discoloration in Addison's disease may be of a patchy character, and identical with that met with in vitiligo."

Byrom Bramwell<sup>1</sup> also admits the possible association of the two conditions, and refers to a case of his own of supposed Addison's disease with leucoderma, not, however, verified by *post-mortem* examination.

It may be of some interest to refer also to a case published by Dr. Hawthorne in the *Transactions of the Medico-Chirurgical Society of Glasgow* (vol. i, p. 190). This case presented the typical characters of leucoderma, and the question was raised and discussed as to whether it could possibly be a case of Addison's disease, but that diagnosis was set aside on account of the fact that "the patient presented none of the constitutional symptoms of Addison's disease, and the absence of these, together with the special features of the pigmentary distribution, rendered it highly improbable that there was any disease of the suprarenal capsules."

To return to the consideration of the case before us, it is probably one of Addison's disease, but one cannot be dogmatic

<sup>1</sup> *Atlas of Clinical Medicine*, vol. i, part 2, p. 62.

in the matter at this stage. The facts in support of the diagnosis have been recorded, but it must be admitted that many facts which throw doubt on the diagnosis may be enumerated, *e.g.*—

1. Apart from the leucoderma, the absence of excessive pigmentation in the region of the nipples, the umbilicus, and from thence to the pubes. The absence of pigment in the furrows of the palms of the hands.

2. The absence of pigmentation in the mucous membrane of mouth.

3. The advanced condition (at the present time) of the tubercular lesion of the lung. Advanced phthisis is uncommon in association with Addison's disease (Greenhow), though a case published by Dr. Hawthorne, in conjunction with the one already referred to, showed at *post-mortem* the presence of cavities in the apices of both lungs.

4. Lastly, there is the possibility of the asthenia and anæmia depending on the tubercular condition of the lungs.

With regard to the treatment, at first this was of a general kind. The patient was kept in bed, and served with light diet. This was supplemented with malt and cod-liver oil. When necessary, cough was relieved by pulmonary sedatives.

Special treatment was also resorted to, tabloids, each containing 5 grains of suprarenal gland substance (B. W. & Co.), being given; on 29th January, three daily; 8th February, four daily; 14th February, six daily.

The effects of the treatment were not very definite—

1. She expressed herself as feeling much better.

2. She gained half a stone in weight.

3. She was able to take food better.

4. She was able to get up out of bed and go about for half the day.

5. No distinct alteration in the character of pigmentation occurred.

6. The quantity of urine increased latterly by about 10 oz. per day, accompanied by a slight rise in specific gravity from 1014 to 1018, possibly the result of increased blood pressure resulting from administration of suprarenal tabloids.

7. No variation in pulse or respiration was noted.

The fact that the treatment has not been markedly successful cannot be wondered at when it is remembered that the girl is suffering from advancing tubercular disease. These are just the cases where treatment by suprarenal gland substance has

so often very little effect, but, although this is a common experience in the treatment of Addison's disease by this special gland substance, and contrasts very strongly with the success observed in the treatment of myxoedema by "thyroid," yet we are on pretty sure ground as regards supplying to the system some substance similar to that secreted by these organs, whether this acts in destroying certain substances which have collected in the blood or supplies certain essential to the organism.

In this case, as has been pointed out, non-success may be the result of the progressive tubercular disease. Where this is absent, many cases improve under this treatment. A case lately under the care of Sir William T. Gairdner did well, and is now in good health, the treatment being carried on at intervals. The patient has been kept under observation by Dr. Carslaw.

Cases the result of traumatism, and giving rise to hæmorrhage into the gland structure and destroying its function, respond to this special treatment. Professor Stockman has told me of such a case which he has under his observation.

In giving an account of Sir William T. Gairdner's case, I have to acknowledge also my indebtedness to Dr. Watson, late house physician in the Western Infirmary, who wrote the first report, and Dr. Smith, who took the photographs from which the illustrations are reproduced.

In conclusion, it may be stated that shortly after this communication had been made to the Glasgow Medico-Chirurgical Society on behalf of Sir William T. Gairdner, he himself made a short reference to the same case in a lecture<sup>1</sup> delivered at the Medical Graduates' College and Polyclinic, London, on 30th May, 1900, and raised the question as to the possible association of leucoderma with Addison's disease. Thereafter a letter appeared in the *Lancet* of 28th July from Sir Samuel Wilks. In the following number of the *Lancet* (4th August) will be found Sir William's reply.

<sup>1</sup> "Clinical Memories," a lecture by Sir William T. Gairdner, reported in *Clinical Journal*, 27th June, 1900.

NOTES OF SIX CASES OF PUERPERAL ECLAMPSIA  
TREATED BY SALINE INFUSIONS.<sup>1</sup>

By ROBERT JARDINE, M.D.,

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University of Glasgow.

AT a meeting of the Edinburgh Obstetrical Society last May I gave notes of twelve cases of eclampsia treated by saline infusions. In my *Clinical Lectures on Hæmorrhage and Eclampsia*, published by Clay, of Edinburgh, notes of five additional cases are given. I shall now add six more which have been treated since the beginning of this year. In these last cases the injection used has consisted of 1 drachm each of acetate and chloride of sodium to the pint, *i.e.*, the normal saline solution with a drachm of acetate of sodium added. In every case the diuretic effect has been prompt and marked. In my first cases I used bicarbonate of potassium, which is a more powerful diuretic than the acetate of sodium ; but it is a poisonous salt, while acetate of sodium is not. To do away with any risk of poisoning I have substituted the sodium, and have used it in much larger quantities.

CASE I.—Mrs. B., æt. 20, ii-para, sixth month, admitted 12th January, at 11.45 P.M.

For two days previous she had had a violent headache and some sickness. Convulsions had come on in the evening, and she had had six fits by the time of admission.

Her face was puffy, but there was no marked œdema. She was semi-comatose. A catheter specimen of her urine became quite solid on boiling. The os admitted one finger.

The treatment adopted was a large dose of salts, 10 grs. of chloral hydrate hypodermically, 2 pints of saline infusion, and a hot pack. As the fits continued, I cleared the uterus by *accouchement forcé*. The hot pack and chloral were repeated. Free diuresis was quickly established, and the bowels acted well.

The fits continued until the evening of the 13th—that is, for about twenty-four hours. She had in all, twenty-eight—ten before and eighteen after delivery. At noon on the 13th I gave her another 2 pints of the infusion, and 10 minims tr. veratrum viride hypodermically. During the next two days she was very

<sup>1</sup> Read at a meeting of the Glasgow Southern Medical Society held on 19th April, 1900.

stupid, but could be roused. She was passing plenty of urine, and the bowels were acting freely. The arm into which the chloral had been injected became inflamed. Hot boracic applications soon relieved this. By the 16th she was quite conscious. The albumen had almost entirely disappeared.

Early on the morning of the 17th she became deeply comatose, and remained so the whole day. Dr. Oliphant saw her with me in consultation, and we practically gave up hopes of saving her. About 10 P.M. we fed her with meat juice, brandy and milk through a tube, gave her 2 pints of infusion, and 10 minims tr. veratrum viride. At 2 and 9 A.M. on the 18th she was again fed through the tube. The coma was now lessening, and by the 19th her mind was quite clear.

After that she made an uninterrupted recovery. The urine drawn off during the coma was loaded with bile pigment, but there was very little albumen in it. She was excreting large quantities of it. I can offer no explanation of the second attack of coma, neither can I account for the large amount of bile pigment in the urine.

CASE II.—J. M'K., æt. 17, i-para, full time. This case was brought in by Dr. Martin. Her health had been good during the pregnancy. On 28th January, about 7 P.M., her first fit had come on, preceded by severe headache. She had had seven fits before admission. They were occurring about every 20 minutes. A hypodermic of half a grain of morphia had been given. She had three fits in the hospital before delivery and four afterwards, making fourteen in all. There was a considerable amount of albumen in the urine. The os was partially dilated. The pupils were contracted to a pin-point; with the onset of a fit they dilated widely, and as soon as it passed off they at once contracted again.

The treatment adopted was a large dose of salts, 3 pints infusion, 10 minims tr. veratrum viride, dilatation and delivery with forceps, and a hot pack.

She made a good recovery, but suffered some pain for a few days from a patch of dry pleurisy. She passed urine freely after the infusion, and the albumen quickly disappeared. In this case the morphia did not seem to affect the excretion of the kidneys, but as the urine was passed into the bed we could not measure the amount.

CASE III.—C. S., æt. 16, i-para, full time. This patient was admitted from the Deserted Mothers' Home. The labour was somewhat prolonged, as the pelvis was slightly contracted.



There was no œdema, nor did the patient complain of headache. When the head was near the outlet, and shortly after the bladder had been emptied by catheter, she was seized with a violent convulsion. She had two fits before delivery, and four after.

She was delivered with forceps. The child weighed 7 lb., and was alive. Three pints of infusion were given under the right breast, 10 minims tr. veratrum viride hypodermically, a large dose of salts, and a hot pack. The urine was not heavily loaded with albumen. Her recovery was uninterrupted after the fits ceased.

CASE IV.—M. C., æt. 22, i-para, admitted 16th February. The patient was sent in by Dr. Stirling with the history of having had ten fits during the preceding twenty-four hours. She was unconscious, but could be roused. There was considerable œdema of the legs and feet, and the labia were swollen. The os admitted a finger. The pelvis was contracted, the diagonal conjugate being  $4\frac{1}{4}$  inches. The urine was loaded with albumen. Treatment: a large dose of salts, 2 pints infusion, 10 minims tr. veratrum viride hypodermically, labia punctured, the os dilated manually, and delivery by craniotomy. I did not try to deliver with forceps, but did craniotomy at once, as the child was dead. She was put in a hot pack immediately after delivery, and this was repeated an hour later.

During the 17th she was fairly well, but had three fits. She was given 3 pints saline infusion and 10 minims tr. veratrum viride. She was passing urine freely.

On the 18th she had a fit at 2:55 A.M., and a second one an hour later. At this time there was conjugate deviation of the eyes to the right. Her condition now became rapidly worse, and when I saw her at 11 A.M. she was dying. There was now conjugate deviation of the eyes to the left, the left arm seemed paralysed, and the face slightly drawn towards the right. The pupils were equal. Both knee-jerks were present. She died a few minutes later. Dr. Carstairs Douglas, who saw her with me, agreed that it looked as if there had been a brain lesion, but the *post-mortem* examination which he subsequently did revealed none.

The brain was somewhat anæmic, but otherwise healthy throughout.

The kidneys were slightly diminished in size, but their substance apparently healthy. A microscopic section revealed nothing abnormal, except slight blocking of some of the tubules with epithelium.

The liver was somewhat enlarged, and showed distinct evidence of nutmeg character. The microscopic section showed marked degeneration of the cells.

The heart was practically normal, with slight roughening of the mitral valves.

The lungs were both cedematous, and the right showed extensive old pleuritic adhesions and calcareous nodules, evidently from old tubercular disease.

The uterus showed no evidence of inflammatory mischief.

The *post-mortem* examination revealed nothing to point to the cause of death, unless the condition of the liver prevented elimination of the poison. Her kidneys were certainly acting well. I was disappointed at losing this patient, but, considering that she had been having convulsions for twenty-four hours before we saw her, perhaps it is not to be wondered at.

What treatment, if any, had been tried before she was sent to us, I do not know. I should like to suggest to the men who send in these cases that a note of their treatment would be both useful and interesting to us.

CASE V.—Mrs. L., æt. 20, i-para, admitted 2nd March. This case was treated by Dr. Black, to whom I am indebted for the notes.

On 2nd March she was delivered at her own home by Dr. Thomson of a full-time, healthy child. Her pregnancy had been uneventful. Forceps were applied at the outlet without  $\text{CHCl}_3$ . Beyond the patient being somewhat excited, the doctor noticed nothing wrong with her. About four hours after delivery, while he was visiting her, she was suddenly seized with a fit. About two hours later she had a second seizure, and then began to have them in quick succession. He gave her  $\text{CHCl}_3$ , which stopped the fits, but as soon as she was allowed to come out of it they recurred. She had about six fits before admission.

When admitted she was extremely restless, and only semi-conscious. There was merely a trace of albumen in her urine. The treatment adopted was a saline infusion of  $1\frac{1}{2}$  pint twice within a few hours, free purgation, and 40 grains of chloral and 6 of bromide in two doses. The fits continued, and within sixteen hours after admission she had eleven in all. She was then given 10 minims tr. veratrum viride. She had two more fits within the next five hours, and they then ceased. She remained stupid for the next two days, and after that her recovery was uneventful.

In all the twenty-three cases this is the only one in which the fits first occurred during the puerperium, and this is the only one with merely a trace of albumen in the urine.

CASE VI.—Mrs. D., æt. 22, i-para, full time. This patient was brought to the hospital by Drs. Russell and Gracie. Dr. Russell had seen her with Dr. Gracie, and advised her removal to the hospital. She had enjoyed good health during her pregnancy. Four months ago Dr. Gracie had examined her urine, but there was no albumen in it then. She was quite well until the onset of labour, and then headache had come on. She had had five fits before admission, following each other in pretty quick succession. The urine was loaded with albumen. There was no cedema.

I treated her for Dr. Black, as he was engaged at the time. I found the os nearly fully dilated. The pelvis was small, the true conjugate being barely 4 inches.

The treatment adopted was a large dose of salts, and 20 grains chloral and 40 of bromide given through a tube, a saline infusion of 2½ pints, and a steam bath after delivery. Delivery was effected in the Walcher position by Dr. Currie. He had to exert all his strength. The child was asphyxiated, but we soon got it to breathe by making traction on the tongue. It did well. There was some laceration of the vagina, and the perineum was partially torn.

The patient made a good recovery.

Twenty-three cases treated by this method have now been recorded by me, and I think they are sufficient in number to enable one to form an estimate of the efficacy of the treatment. Of the twelve cases given by me before the Edinburgh Obstetrical Society last year, four were fatal. The first one treated was fatal, but it ought not to be included in the series, as only normal saline solution was used, and, besides, the woman was moribund when admitted. Of the last eleven recorded, two have died, but one of the deaths was due to a perforating duodenal ulcer on the seventh day after her eclampsia had been cured. Even if we take the death-rate of six in twenty-three, looking at the nature of the cases, I think it will compare favourably with the rate of any other method of treatment. If we deduct the two cases, which in all fairness should come off, we have four deaths in twenty-two. One of my critics has been good enough to say that some of my cases were slight, therefore the results are nothing wonderful. I am quite willing to admit that two or three of

them appear to have been slight, but I would like to point out that these cases were ones I happened to get very early. Many of the cases only came to us after they had been having fits for many hours, and I know that some of them were sent to us after a consultation had been held and a hopeless prognosis given. In hospital work we have to deal with the very worst cases, and the majority of these were bad enough to test any form of treatment.

Three years ago we had eight cases in the hospital, and lost five of them. These five were treated in the usual way—one with morphia entirely, and one with veratrum viride, and the others with chloral and bromide, &c. The three saved were the only ones treated by saline infusion. It may be a coincidence, but it is a remarkable one.

I think I may fairly claim to have established that this method of treatment is worthy of a trial. There is no risk in giving these large infusions. Two or three pints can easily be given under the breast by means of the apparatus Messrs. Gardner have made up for me. I have never seen any bad effects locally, although I must have given at least two hundred. Of course, rigid aseptic precautions are necessary.

## CASE OF CANCER OF THE BODY OF THE UTERUS.<sup>1</sup>

By J. NIGEL STARK, M.D., F.F.P.S.G.,

Assistant Surgeon, Glasgow Samaritan Hospital for Women; late Assistant Physician, Glasgow Maternity Hospital.

CANCER attacking primarily the body of the uterus is of much less frequent occurrence than cancer in the cervix, though it is not so uncommon as was formerly believed. The specimen which I show is a well-marked example of corporeal uterine cancer, and in every respect is typical of such cases. The patient from whom it was removed was 45 years of age, and when admitted to the Samaritan Hospital on 6th March, 1900, she complained chiefly of two symptoms—pain in the left side, and the too frequent recurrence of menstruation, or, at anyrate, what the patient called menstruation. The first symptom mentioned, pain, had begun about seven months

<sup>1</sup> Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 23rd May, 1900.

previously, and, gradually increasing in severity, was now fairly constant, and was always aggravated during a period of bleeding. The frequent menstruation had existed for a year, and came, on an average, every two weeks.

The patient was a widow who, since her husband's death eight years previously, had been obliged to earn her living as a charwoman, and for the year before her admission her work had been harder than usual. She had been married for sixteen years; she had been pregnant six times. Once a stillborn child had come; on the other five occasions the children were born alive, and all the labours had been normal and easy. Her eldest child was 20 and her youngest 8 years old. Her menstrual history was not noteworthy, having begun when she was 16 years of age, and, until a year before her admission into hospital, having always been regular in time, normal in quantity, and painless. There never had been any intermenstrual discharge, and all the organs of the other systems were healthy.

Upon examination the uterus was found large, firm, but freely movable. There was no ulceration of the cervix, no thickening of, nor deposit in, the broad ligaments, though the right ovary felt somewhat enlarged.

On 20th March an anæsthetic was administered to the patient. This was done for two reasons—one being to make a careful examination for enlarged glands which might be palpable through the vagina, the abdominal walls, or the rectum, and the other to remove some uterine tissue for future microscopical examination. As the result of the examination, the mobility of the uterus could be more readily determined, no enlarged glands could be detected, and the curette removed two or three strips of tissue, which, even to the naked eye, seemed almost absolutely diagnostic of cancer, and the removal of which produced considerable hæmorrhage. Carbolic iodine was applied to the interior of the uterus, which was afterwards packed with cyanide gauze.

On the next day, the report from Dr. Galt, pathologist to the Hospital, was to the effect that the tissue which he had examined was undoubtedly cancerous; and on the following day (the 22nd) I performed vaginal hysterectomy. From the Ward Journal I condense the following report of the operation and after-treatment:—

"Three strong silk ligatures were passed through the anterior and posterior lips of the cervix, tied tightly, and left long—12 to 16 inches. They thus sealed up the cervical canal, preventing escape of uterine contents over the wound-area

during the operation, at the same time acting as suitable and satisfactory tractors. A circular incision was then made round the cervix, about half an inch from the external os. With scissors and fingers the mucous membrane was pushed up anteriorly until the utero-vesical pouch was reached. A similar procedure was adopted posteriorly, and the pouch of Douglas opened. A sponge was then pushed up to maintain the bowels in position. The uterus, being now free except laterally, was dragged downwards, the broad ligaments on each side being ligatured, piece to piece, by silk. The highest ligatures on both sides were placed beyond the ovaries and tubes, which, along with the uterus, were then removed, those upper ligatures being cut short while the lower ones were left long. Some oozing occurred on the right side, and it was thought advisable to leave some pressure forceps on the bleeding points. The vagina was then packed with iodoform gauze. A rectal saline injection was given immediately after the patient was put to bed. The pulse was good, and the patient's condition favourable."

In the evening the temperature was normal, and the pulse-rate 72. During the next day the patient complained of pain, which, however, was relieved by removal of the pressure forceps. There had been very little bleeding, the pulse had remained firm, and the general condition had been good. Five days after the operation I removed all the gauze packing, swabbed out the vagina with dry cotton-wool, and introduced fresh gauze. In two days later the wound was perfectly healed, and the patient's condition satisfactory. From first to last the recovery was uninterrupted. The highest temperature was 99·8° F., and that only for an hour or two. The catheter was never required, food was taken well from the second day, and the patient left hospital in less than four weeks after the operation.

It is pretty generally accepted as a belief, I think, that cancer is purely local in its origin; that it does not attack the body as a constitutional disease, but begins in one place; and that, if not removed at a very early stage, it will inevitably spread to more distant parts. Epithelial cells all over the body die daily and are thrown off, new cells taking the places of the old ones. From some cause or causes, of which at present we are ignorant, a certain area of epithelial cells grows inward and invades the tissues, living, multiplying, and increasing where they have no right to be or to live, and in the structure of which they grow at the expense of the original cell inhabitants.

Believing that the danger of cancer, over and above its

local destructive action, is the certainty of extension to remote organs, we are compelled to put forth all our energies in making an early diagnosis of the disease, and in following this up by immediate treatment, if that be possible. One of our commonest and saddest experiences in gynecological practice is to see patients for the first time whose cases are absolutely beyond helpful operative interference, to whom we can hold out no hope so far as effective surgical treatment or a possible permanent cure is concerned. This ought not to occur so frequently as it does, so far as cancer beginning in the cervix is concerned; but, as regards cancer of the body of the uterus, some excuse exists in the difficulty frequently experienced in making a diagnosis in the early stages of the disease. And yet, as I have said, if we hold to the view that cancer is at first a local disease, and that danger consists in its extension from a certain locality to neighbouring glands and remote organs, we must employ every effort to make early diagnosis.

In corporeal uterine carcinoma, confined and circumscribed in area to the uterus, there is only one method of treatment worthy of consideration—hysterectomy; and there is only one time for operation, and that is whenever the diagnosis has been made. The symptoms noticed first by the patient, and upon which we must largely depend in forming a diagnosis, are hæmorrhage and pain, while we also note in our minds the age and the state as regards marriage or non-marriage as important factors in determination. The hæmorrhage begins in an insidious fashion, and as the period of life of the patient is not uncommonly associated with irregular menstruation, the idea of the possibility of cancer either does not occur at all, or if it does, is set aside with a feeling of horror. Besides, every one knows that there are many cases of irregular menstruation about the period of the menopause which are not due to cancer.

As regards the pain, it varies greatly in different women. Frequently the cervix is hard and contracted, and the contents of the uterus—blood or softened cancerous nodules—are expelled with difficulty, and produce strong bearing-down pains. Pains in the loins and sacral region are common, and very often occur paroxysmally at certain periods of the day. This characteristic I saw well exemplified lately in another case upon which I performed abdominal hysterectomy. Every day at almost the same hour the patient's sufferings began, and were so intense as to require the administration of morphia for their relief.

Of course, in the later stages of the disease, peritonitic pain set up by inflammatory adhesions is present, and further increases the patient's sufferings. Upon examination there may be nothing more to be detected than that the uterus is uniformly increased in size and is of firmer consistence than normal, and as in the case of myoma there might only be these signs existent, together with irregular hæmorrhages, it is conceivable that some difficulty might occasionally be found in making a differential diagnosis; but, in general, when the whole clinical history is also taken into consideration, an experienced gynæcologist can determine the nature of the disease without further aid. If from the microscopist we could obtain an early diagnosis, infallible and certain, a great load would be lifted from our minds, though perhaps a corresponding responsibility laid upon his. But there is great divergence of opinion upon this point, and great difference of action. Some gynæcologists rely upon their own tactile sensations, their experience, and the clinical history of the case; some make microscopical evidence a help to these most necessary evidences; whilst others rely upon the microscope alone, distrusting the variable symptoms presented by the patients, and the slight clinical evidences in early cases. (And let me remind you that I have been speaking all along of cases in the early stages, for, of course, later on the clinical signs and symptoms are unmistakeable.) As usual, the middle course is the wisest and safest, and my own conviction is that a great deal of the disbelief in microscopical evidence, which is held by so many good gynæcologists, is due to the fact that the great special skill and experience required for the examination of uterine scrapings have often been wanting in the examiners. Of course, even the best and most trustworthy microscopists can or may make out nothing definite from a few small pieces of uterine scraping; but, even in early cancer of the body of the uterus, the pieces detachable by a curette are usually large enough to enable a microscopist to assure us that we are actually dealing with cancer, and thus permit us to proceed with treatment, feeling assured so far as diagnosis is concerned. As will be remembered, this was the course I adopted; and though, from clinical evidence, I was almost certain of my diagnosis, yet it was more satisfactory to have it confirmed, as it was, by the result of microscopical investigation. The condition discovered was that of tubular glands filled with, and lined with, epithelial cells. This type of cancer of the body of the uterus—an adeno-carcinoma—is that most commonly met, and begins in



the mucous membrane, passing then into the muscular tissues of the uterus, the peritoneal covering, the broad ligaments, the lymphatics, and glands. In some rare cases, further, an actual inoculation of healthy tissues has been produced, notably on the vagina.

The specimen which I show is that of an enlarged uterus, with tubes and ovaries attached, measuring 5 inches in length. On external appearance there is nothing to indicate that it is the seat of malignant disease; the tubes appear normal, there being a well-marked corpus luteum in the right ovary. The cavity has been opened by an incision through the anterior wall from the fundus to the external os. The interior of the cavity is lined by a spongy endometrium, pinkish in colour, presenting fungoid projections which are very soft and friable, readily removed by the finger. This morbid condition extends over the whole surface of the body cavity, but stops at the internal os, and the tissue of the cervical canal is healthy. The wall is much thickened. The tissues at the broad ligaments are quite healthy.

Therefore, taking everything into consideration, this case must be looked upon as one favourable for operation, and also one favourable as regards prognosis.

## **ON THE CLINICAL EXAMINATION OF THE BLOOD, SPECIALLY BY MEANS OF DRIED AND STAINED FILMS.<sup>1</sup>**

**By J. M'GREGOR-ROBERTSON, M.A., M.B., F.R.S.E., F.F.P.S.G.,**

**AND**

**J. SOUTTAR M'KENDRICK, M.D., F.R.S.E.,  
Extra Dispensary Physician to the Glasgow Western Infirmary.**

My purpose is not to offer you anything in the nature of an original contribution to the study of the histological characters of blood or their methods of demonstration.

Anyone who has been engaged, as I have been now for almost twenty years, in the practice of medicine, must be profoundly conscious of the tremendous changes which have

<sup>1</sup> Being remarks introductory to a microscopical demonstration of blood films given to the Medico-Chirurgical Society of Glasgow on 6th April, 1900. The paper was read by me, hence the use of the first person singular; but it embodies the work of both.—J. M'G.-R.

occurred during even that time in the methods of clinical diagnosis, and of the advantage which the medical student of to-day has, or ought to have, in being able to study the phenomena of disease by more accurate and scientific methods than were available to an older generation of students.

I was born into medicine, like others here, when diagnosis by pulse and tongue was, one might say, only in process of being reinforced by thermometer and stethoscope; and when an old tablespoon, the dregs of a vinegar bottle, and a handy gas bracket were deemed a fairly adequate chemical equipment.

You will agree with me that a new clinical method, which is applicable only in a scientific laboratory or a well-equipped hospital, is but of limited and precarious usefulness, and that the final test of the value of a new clinical method is its ultimate adaptability to the needs and limitations of the general practitioner.

While admitting the value of the assistance to the busy practitioner afforded by research laboratories or associations or firms who, for moderate sums, undertake the chemical and microscopical examination of clinical material, I hope they are agencies not likely to be permanent, at least for such purposes, but existing only for a time to overtake part of the work of diagnosis, which, ultimately, by the better equipment of our hospitals and schools, and the more complete practical training of our students, every practitioner of medicine will be able to do for himself.

I fancy many of you have, like me, been groping your way through the more elaborate details of modern urine analysis, modern gastric methods, and microscopical and bacteriological aids to diagnosis, and will be in sympathy with me when I mourn over the failure of the investigators and devisers of new methods to remember the burdens and long hours of the oppressed general practitioner, and to adjust their devices, if possible, to his much harassed pocket and his fast vanishing leisure.

I have thought, therefore, it might meet with your acceptance if I laid before you, as briefly as I can, my experience of one of these new methods—that of the clinical examination of the blood, particularly by means of fixed and stained films—and what Dr. M'Kendrick and I, working together, have so far found to be the simplest and shortest method, which, whatever defects it may have from a purely pathological point of view, seems to fulfil the necessary requirements of any aid to diagnosis which is to be constantly available.

The fact that, from the examination of a stained blood film

alone, an absolute diagnosis can be made in one or two cases of disease, while in other cases a differential diagnosis is impossible without it, is conclusive proof of the value of this method.

But, when it was introduced by Ehrlich in 1878-79, the process was long and somewhat elaborate. It was, briefly, as follows:—He spread a thin film of the blood to be examined on a cover-glass. The preparation was allowed to dry in air, and was then placed on a copper plate, heated to a temperature of between  $110^{\circ}$  and  $120^{\circ}$  C., and was kept at this for two hours or more. This fixed the protoplasm of the blood-cells. The cover-glass was then floated on one staining solution for a short time, washed, transferred to a second colouring solution, thereby doubly or trebly staining the preparation, which was then washed, dried, or dehydrated in absolute alcohol, cleared in xylol, and mounted in balsam. The usefulness of this method is obviously limited, because of the time required as well as because of the nature of some of the detail.

The later work of Ehrlich and of other observers, among them Muir, Gulland, Nikiforoff, Kanthack, has shown that the whole process may be quite satisfactorily performed in a much shorter time, indeed, in even something like four or five minutes, and in an easier way.

For all practical clinical purposes the preparation may be fixed in a few minutes by drying in air, with the aid of a slight degree of heat from a spirit lamp or a Bunsen burner, and by subsequent immersion for two or three minutes in a mixture of equal parts of absolute alcohol and pure ether (Nikiforoff).

If, however, one desires to study finer details of protoplasmic structure, the film is fixed by immersion in an alcoholic solution of corrosive sublimate, to which a proportion of common salt is added,<sup>1</sup> or in an alcoholic solution of formol,<sup>2</sup> or a saturated watery solution of picric acid.<sup>3</sup>

<sup>1</sup> *Muir's method*.—(1) Immerse the preparation, without previous drying, in a saturated watery solution of  $\text{HgCl}_2$  with three-fourths per cent  $\text{NaCl}$  for thirty minutes; (2) wash in three-fourths per cent  $\text{NaCl}$ ; (3) take through successive strengths of alcohol, up to absolute; (4) stain, &c.

<sup>2</sup> *Benario's method*.—Formalin, 1 part; water, 9 parts; absolute alcohol, 90 parts. In this solution immersion for one minute is sufficient. Then wash and stain, preferably in eosin-hæmatoxylin.

<sup>3</sup> *Müller's method*.—(1) After heating the preparation up to  $110^{\circ}$  C. for ten to fifteen minutes, and then letting it become cold, immerse it for twenty-four hours in a saturated watery solution of picric acid; (2) wash for twenty-four hours in water; (3) stain in hæmatoxylin or borax-carmin.

By whatever method the preparation is fixed, the staining may be accomplished in from half a minute to two or three minutes.

Owing to the fact that the red and white cells are differently affected by different stains, and that the nuclei of the white cells and the granules of the protoplasm of the cell body react also differently, it is possible to stain by two or more different colours, and so to produce a counter-stain. The preparation may, therefore, after immersion in one staining solution, be washed and transferred to another, or may be counter-stained by one immersion in a solution containing two or more staining agents.

The staining agents in chief use are eosin,<sup>1</sup> with hæmatoxylin as a counter-stain;<sup>2</sup> eosin, with methylene-blue;<sup>3</sup> or the single solution of Ehrlich's triple stain<sup>4</sup> of acid fuchsin, methyl-green, and orange G.

The differential character of the stain is due to the fact that certain granules of the blood-cells react to the acid of the staining agent, other granules to the base, while, in a third set of cells, the protoplasm of the cell-body is hyaline, without specific granulation, and so is little or not at all affected by the stain, though the nucleus is. Thus, it has been found that among the white cells of the blood there are varieties, which

<sup>1</sup> *Eosin solution.*—Eosin, 1 gramme; water, 100 c.cm.; absolute alcohol, 100 c.cm.

<sup>2</sup> *Böhrer's or Delafield's hæmatoxylin solution.*—Delafield's is prepared as follows:—2 grammes crystallised hæmatoxylin solution, dissolved in 12.5 c.cm. absolute alcohol, to which add 200 c.cm. concentrated watery solution of alum. Allow the whole to stand for four days, filter, and add 100 c.cm. glycerine and 100 c.cm. methyl alcohol. Allow to stand for other two days, filter. For use, dilute with an equal volume of water, and *always filter immediately before use.*

<sup>3</sup> *Loeffler's alkaline methylene-blue solution.*—30 c.cm. concentrated alcoholic solution of methylene-blue, 100 c.cm. one-tenth per cent potash solution.

The eosin-hæmatoxylin solutions stain the red cells and oxyphile granules red, and the nuclei in the hæmatoxylin colour. The eosin-methylene-blue solutions stain red cells and oxyphile granules red, nuclei and mast-cell granules blue, neutrophile granules very faint salmon hue.

<sup>4</sup> *Ehrlich's triple stain.*—Saturated watery solution orange G., 135 c.cm.; saturated watery solution acid fuchsin, 65 c.cm.; distilled water, 150 c.cm.; absolute alcohol, 150 c.cm.; saturated watery solution methyl-green, 125 c.cm. Mix these ingredients thoroughly, then add with constant shaking glycerine, 100 c.cm., and absolute alcohol, 100 c.cm. This is, however, best made from the Ehrlich-Biondi or Biondi-Heidenhain powder, obtained from G. Grüber of Leipsic.

Ehrlich's stain colours red cells orange, oxyphile granules copper-red, neutrophile violet. Mast-cells are unstained, except the nuclei, which are pale green. They appear, therefore, as polynuclear cells free of granules.

are distinguished from one another by their reaction to different staining agents.

This is the basis of the modern classification of the white cells of the blood.

The white cells, the granules of whose protoplasm react to acid stains, are called *oxyphile*,<sup>1</sup> and, since eosin is the chief of these acid stains, the most obvious of these cells have been called *eosinophiles*. White cells whose granules react to basic stains are called *basophile*. On the other hand, the protoplasm of a third variety is *hyaline*, and is little if at all stained by either, while the nuclei of these, as of the others, react to nuclear stains.

Thus, differentiated by staining agents, there are three varieties of white cells—

1. Oxyphile.
2. Basophile.
3. Hyaline.

In the case of the first two, the granules may be coarse or fine; in the case of the last, there is a cell distinctly large and one distinctly small, though there are others intermediate in size. Thus, you have a further sub-division into—

1. Coarsely granular oxyphile (eosinophile).
2. Finely granular oxyphile (myelocyte and polymorpho-nuclear neutrophile).

<sup>1</sup> Of a large number of stains used, Ehrlich has made a classification according to their reaction to white cells into acid basic and neutral. This is not meant to be, it must be observed, a proper *chemical* classification. It is histological rather.

To the so-called *acid series* belong—Eosin, aurantia, indulin, nigrosin, bengalin, orange G., acid-fuchsin, tropaeolin, Bordeaux, ponceau, fluorescin, chrysolin, narcein, picrate of ammonium, naphthylamin-yellow, coccin, pyrosin J. and R.

To the *basic group* belong—Fuchsin, roseo-naphthylamin, cyanin, saffranin, Bismarck-brown, gentiana, dahlia, methyl-green, methyl-violet, methylene-blue, rhodamin, pyronin, amethyst-violet.

A *neutral stain* is obtained by a combination of basic with acid stain. Such a combination is not easily soluble, unless in excess of the acid stain. Ehrlich gives as illustrations of combinations of such so-called neutral mixtures the following :—

1. Combination of one acid with two basic stains—
  - (a) Orange G. with amethyst-violet and methyl-green.
  - (b) Narcein     „     pyronin     „     methyl-green.
  - (c) Narcein     „     pyronin     „     methylene-blue.
2. Combination of two acid with one basic stain—
  - (a) Orange G. with acid-fuchsin and methyl-green.
  - (b) Narcein     „     acid-fuchsin     „     methyl-green.
  - (c) Narcein     „     acid-fuchsin     „     methyl-blue.
  - (d) Narcein     „     acid-fuchsin     „     amethyst-violet.

3. Coarsely granular basophile (Mastzellen).<sup>1</sup>
4. Finely granular basophile.
5. Large hyaline.
6. Small hyaline (lymphocyte).

But even this is not a complete classification, for there are at least two kinds of white cells containing finely granular protoplasm, reacting faintly to acid and to neutral stains—one with a large, often reniform, nucleus, the *myelocyte of leukæmic blood*, and another with a multipartite nucleus, or, at least, polymorphic nucleus, the so-called *multinuclear or polymorpho-nuclear neutrophile of normal blood*. To these two the large hyaline cell bears a strong resemblance, differing from the true marrow-cell or myelocyte in the absence of neutrophile granules, and differing from the polymorpho-nuclear neutrophile in the simple character of its nucleus.

Now, in normal blood the greater proportion of the white cells consist of the finely granular oxyphile, more commonly called neutrophile, so called by Ehrlich, who believed the granules reacted to the combination of both acid and basic stain, though Kanthack and Hardy have shown them to be really oxyphilic.

The next most common variety of white cell in normal blood is the small uni-nuclear lymphocyte, while the large hyaline cell is third in order of percentage, and the eosinophile is least common and very difficult to find. The basophile is not found.<sup>2</sup> All these varieties, taken together, constitute, in normal blood, a very small proportion of the cellular elements, amounting as they do to not more than, on an average, 1 for every 700 red cells.<sup>3</sup> In leukæmia, on the other hand, the proportion of white to red may become as great as 1 to 10, or even greater than that.

Yet even more significant changes are revealed when the proportion of the several varieties of white cells in normal blood is compared with the proportion in certain diseased conditions.

The percentages of these four varieties of white cell of

<sup>1</sup> The granules of these cells are brought out only by the methylene-blue of the staining solutions whose formulæ have been given. They may be shown (in pathological blood) by the following:—Saturated (distilled) watery solution of dahlia, 100 c.c.; absolute alcohol, 50 c.c.; glacial acetic acid, 12·5 c.c. The preparation should be immersed in this for twenty-four hours, then washed, cleared, and mounted.

<sup>2</sup> Ehrlich says it is found to the extent of 0·5 per cent as a maximum.

<sup>3</sup> Red cells of normal blood (per cubic millimetre), 4,500,000 in female to 5,000,000 in male; white cells in normal blood (per cubic millimetre), 6,000 to 10,000.

normal blood, and the average size of each variety, is given as follows:—

SIZE.	VARIETY.	PERCENTAGE OF TOTAL WHITE.
9-14 $\mu$ .	Polymorpho-nuclear neutrophile,	70-72
7-9 $\mu$ .	Small uni-nuclear lymphocyte,	22-25
12 $\mu$ .	Large hyaline,	2-4
12 $\mu$ .	Eosinophile,	2-4

Now, in leukæmic blood you have these proportions altered, and, in addition, you have a new element—the large (about 15  $\mu$ ) mono-nuclear, finely granular myelocyte; and the average proportion of these varieties of white cells of leukæmic blood in the specimens Dr. M'Kendrick will demonstrate to you are—

Marrow cells, or myelocytes,	between 35 and 50 per cent.
Polymorpho-nuclear neutrophiles,	17 „ 38 „
Eosinophiles,	10 „ 20 „
Large hyaline,	7 „ 10 „
Small uni-nuclear lymphocyte,	1 „ 5 „

In short, in this disease (myelogenic leukæmia) an abnormal variety of white cell is added to the blood, which out-numbers all the normal varieties, and a variety existing in normal blood to only between 2 and 4 per cent is increased about five fold—the eosinophile; while the small hyaline cell is reduced from between 15 and 20 to between 1 and 5 per cent. Further, the basophile mast-cell is found to a marked extent, an increase unknown in any other condition, while nucleated red cells are also common.

I have taken leukæmic blood as illustrative of the very remarkable diagnostic facts this method of blood examination reveals, because the facts are in it so obvious and striking, and because Dr. M'Kendrick is able to show each one of those facts by means of specimens from a case at present under treatment. These specimens illustrate how comparatively easily not only a determination of the proportion of total white to red may be made, but also how a differential count of the varieties of white may be done. It will also be clear what assistance such films, taken from time to time in the course of treatment, could render in determining the effects of treatment.

Changes in the red cells are revealed equally clearly by this method. Such changes are of several kinds:—

1. Alterations in size—increase, *macrocytes*; decrease, *microcytes*.

2. Changes in shape—oval, irregular, pear-shaped, prickleshaped—*poikilocytosis*.

3. Changes of degeneration shown by a tendency of the cell protoplasm to stain irregularly, or to pick up from a staining mixture one pigment by one part of the protoplasm, another pigment by another—*polychromatophilia*.

4. The occurrence of nucleated red cells—(a) of the size of normal blood cells ( $10\ \mu$ )—*normoblasts*; (b) large sized cells ( $11$  to  $20\ \mu$ )—*meguloblasts*; (c) rare, very small nucleated cells—*microblasts*.

It is suggested that the occurrence of normoblasts indicates a regenerative process, while the presence of megaloblasts is the sign of a grave disorder, and, if they are in large numbers, is of almost fatal significance.

Specimens of each of these varieties of red cell are shown under the microscope. The nucleus is stained by the hæmatoxylin or methylene-blue or green; the rest of the cell by the eosin, or orange G.

*The method* followed in making these preparations was as follows:—

1. The slides are first prepared by washing in soap and water, then in plain water, drying, and steeping in ether, in which they lie till needed.

2. The finger or lobe of the ear of the patient is washed with soap and water, then dried, then washed with alcohol and ether, and dried. The lobe of the ear is to be preferred. The friction of washing brings the blood to it. If the lobe be taken between finger and thumb, and the puncture be rapidly made, it is painless. The blood flows readily—pressure must not be used—and can be readily stopped.

3. The puncture being made with the lance point obtainable for the purpose, the first four or five drops are removed with a piece of clean gauze. Then a clean slide, held by the edge between the finger and thumb, is made to touch the hanging drop (but not to touch the skin) about the middle of the slide. This slide is held between finger and thumb of left hand, a second clean slide is taken by the right hand and its edge held at an angle of  $45^\circ$  to the surface of the one with the drop on it. The edge is then swept steadily along the surface to the end of the slide, spreading out a thin film of blood as it goes.

4. This slide, with the film thus spread, is held in the fingers over a spirit flame till the film is dry. This film may now be kept indefinitely if kept quite dry. The film may thus be prepared by the bedside, placed in an appropriate box, and



brought home for examination. For the further process, glass stoppered cylindrical bottles, of 2 oz. capacity, capable of holding two or three slides vertically, are used. Such can be obtained from the York Glass Co. or through Baird & Tatlock. One contains the mixture of alcohol and ether, a second the eosin solution, a third the hæmatoxylin or methylene-blue, a fourth Ehrlich's mixture.

5. The dried film is placed in the alcohol and ether mixture. It should remain two or three minutes, but it may remain any length of time without injury.

6. Removed from the fixing solution, the slide is dried, then immersed in the eosin solution for fifteen to thirty seconds. It is then washed.

7. The eosin stained preparation is now immersed in the hæmatoxylin or methylene-blue for a few seconds to one or two minutes.

8. It is then washed, dried with heat, cleared up in xylol, and mounted in balsam.

The specimens require to be examined under a one-twelfth oil immersion.

At the time the film is made the number of red cells and quantity of hæmoglobin in the blood should be determined.

Each observation of the same patient should be made, as nearly as possible, at the same time of day, especially at the same interval from a meal. The best time is before breakfast.

It was not my object to discuss the value of this method of blood examination, or to go into any detail as to its usefulness in differential diagnosis. The above remarks were merely meant to be introductory to the demonstration set out by Dr. M'Kendrick.

Perhaps, however, this paper may be deemed deficient without, at least, a brief account of the results of the method. In preparing the following summary we have had regard only to the practically useful facts.

#### *Diagnostic aid from the red cells.*

1. In all secondary anæmias—that is, anæmias dependent upon some other condition, such as hæmorrhage, febrile diseases, chronic affections such as kidney or liver disease or dysentery, malignant disease, bad hygiene, chronic poisoning, &c.—the fact of anæmia is readily settled by the blood film, but a little practice speedily enables one to estimate in a manner, otherwise impossible, the degree and gravity of the blood change.

In slighter degrees of anæmia the only obvious differences are (a) the alterations of size of the red cells and (b) their lack of colour. The cells are smaller and paler. The loss of colour may not be apparent in every cell. Some seem but the pale ghosts of the normal; in many, the lessened hæmoglobin shows chiefly in the centre of the cell, because of its thinness there, and the cell has the appearance of a colourless central space, of circular outline, surrounded by a rim of colour. Eosin staining tends to accentuate this difference. The red cell having an affinity for that colour, the contrast between normal cells, those somewhat deficient in hæmoglobin, and cells much washed out, becomes very striking.

In profounder degrees of anæmia there are added—(c) alterations in shape (poikilocytosis), (d) polychromatophilic evidences of degenerative change within the cell.

In still more profound degree there is (e) the presence of normoblasts, and occasionally a megaloblast.

2. Pernicious anæmia, on the other hand, shows in most striking degree the variety of size and shape of red cells, but with this noteworthy difference, that while microcytes are present, *increase* in the size of the cells is more characteristic. Degenerative changes are evident, and normoblasts are present, *but megaloblasts are numerous*. This abundance of megaloblasts is a symptom of specially evil significance.

Another contrast between simple anæmias and pernicious anæmia lies in the fact that while the red cells of the pernicious disease may be enormously reduced in number, the individual cells may contain more than the normal amount of hæmoglobin.<sup>1</sup> This not only distinguishes pernicious from ordinary anæmias, but also from *chlorosis*, in which the number of the red cells

<sup>1</sup> The colour index is a short way of expressing the relation between the number of red cells and the amount of hæmoglobin. The

$$\frac{\text{percentage amount of hæmoglobin}}{\text{percentage number of red cells}} = \text{colour index and ought to} = 1.$$

If the red cells are 100 per cent, and the hæmoglobin is 100 per cent, then the colour index is  $\frac{100}{100} = 1$ .

Now in *pernicious anæmia* the percentage of red cells may be as low as 25, but the hæmoglobin may be 27 per cent. The colour index is, therefore,  $\frac{27}{25} = 1.08$ .

In *chlorosis*, on the other hand, the percentage of red cells may be 82, while the hæmoglobin is as low as 41, colour index =  $\frac{41}{82} = 0.5$ .

In the ordinary *secondary anæmias* the colour index is practically always less than 1, but it seldom goes so low as in *chlorosis*, in which this lowness is one of the most significant facts of the disease.

may be little below normal, while the amount of hæmoglobin in each cell is enormously reduced. A single glance, therefore, at a blood film might, by the pallor of the red cells, dispel the fear of pernicious anæmia, and swing the balance of evidence over to chlorosis.

A blood film, then, will often unmistakeably warn one of the gravity of an anæmic case, which otherwise might have been lightly considered. It will differentiate, by the number of megaloblasts, the high colour of the individual corpuscles, the numerous macrocytes, and the markedly misshapen cells, the blood of pernicious anæmia from the undersized, washed-out looking, but less misshapen cells of chlorotic blood, with its few, if any, megaloblasts, though normoblasts be abundant. It may also raise the suspicion of concealed malignant disease, if the blood presents the characters of secondary anæmia, low colour index, pale but not otherwise markedly abnormal cells, with perhaps a rare normoblast, in a person who, without marked symptoms or assignable cause, has been progressively losing strength and flesh for some time.

3. It is in the red cells that the malarial organism is found, and the staining methods described may be used.

4. Normoblasts and megaloblasts are frequent in leukæmia.

It will save further reference to the anæmic diseases if we remark here that, as regards the white cells, there is little of diagnostic value, but in pernicious anæmia the white cells are deficient (leucopenia), sometimes markedly so, and of the total white cells the lymphocyte has its proportion increased. In chlorosis the condition as regards white cells is similar.

As regards secondary anæmia, there is one fact regarding the white cells of great value. The anæmia of malignant disease may be so profound as to produce a reduction in the number of red cells and appearances in the blood film akin to those of pernicious anæmia, *but in such cases there is usually a marked increase of white cells* (leucocytosis), at once differentiating it from an uncomplicated case of pernicious anæmia.

#### *Diagnostic aid from the white cells.*

The changes relating to the white cells which are of diagnostic value refer to (1) either the total number of white cells of all kinds, per cubic millimetre of blood, and their proportion to the red; or to (2) the percentage proportion of the different varieties of white cells, considered by themselves; or (3) the presence of abnormal varieties. Now, the total number of white cells may be considerably increased above the upper limit of the ordinary standard (this is called a

*leucocytosis*); or the total number may be diminished below the lower limit of the ordinary standard (this is called a *leucopenia*). In the case of increase it may affect all varieties alike, so that the proportion of each is not disturbed; or it may be due to an excess of one or more varieties only.

These conditions are not all abnormal. There are, indeed, certain leucocytoses which are quite physiological, but in those it is always the polymorpho-nuclear variety that is increased. When any increase in the other varieties occurs, the condition is a pathological one.

*Physiological leucocytosis* is found—

1. In the blood of the newly born, in which a count of 30,000 white cells is not remarkable, even in children up to 2 years of age.

2. In the blood of women in the *later* months of pregnancy, in which 13,000 is an average count, rising to 16,000 or 18,000 at the beginning of labour.

3. In the blood, after parturition, for several weeks. Between 20,000 and 30,000 is not infrequent, even two weeks after parturition. This must not be forgotten in the differential diagnosis of septic conditions.

4. The blood of all persons in ordinary health shows a leucocytosis, beginning about an hour after each meal which contains proteids. This increase may raise the number of white cells to 13,000, and it lasts for several hours. Blood examinations are, therefore, best made before a meal, and preferably before breakfast. The correlative of this is that the blood of a fasting person will show a leucopenia, and any disease which hinders absorption of food will produce a more or less permanent leucopenia. Even a functional gastric or gastro-intestinal disorder may do this.

Fleeting leucocytosis is also caused by exercise, massage, cold bathing of short duration, and prolonged hot baths.

*Pathological leucocytosis* occurs in a large number of diseases, but here, as already stated, the absolute increase in the total number of white cells is accompanied by an alteration in the percentages of the different varieties. In most cases it is the polymorpho-nuclear neutrophile variety that is chiefly in excess, in a few it is mainly the lymphocytes (*lymphocytosis*), sometimes it is the eosinophiles (*eosinophilia*), while in myelogenic leukæmia it is a white cell, foreign to normal blood—the myelocyte—that is most abundant. This might be termed *myelocytosis*.

The pathological leucocytoses are as follows:—

1. Post-hæmorrhagic leucocytosis. Within a short time after

hæmorrhage the white cells may rise to 16,000 or 18,000, and the chief increase is in the polymorpho-nuclear neutrophile.

2. Leucocytosis of inflammatory diseases:—Pneumonia, endometritis, salpingitis, cholecystitis, and non-tubercular inflammations of serous membranes (pericarditis, pleurisy, peritonitis, arthritis—simple and rheumatic).

3. Leucocytosis of septic conditions:—Puerperal septicæmia, septic meningitis and cerebro-spinal meningitis, malignant endocarditis, osteomyelitis, appendicitis, abscess, furunculosis, and all suppurating and pyæmic conditions.

4. Leucocytosis of malignant disease.

5. Leucocytosis of infectious diseases:—Cholera, relapsing fever, typhus, scarlet fever, diphtheria, follicular tonsillitis, erysipelas, small-pox, gonorrhœa, secondary syphilis.

6. Leucocytosis of skin affections:—Dermatitis, pemphigus, herpes, prurigo, sometimes eczema.

7. Toxic leucocytosis:—Quinine poisoning, uric acid diathesis, uræmic poisoning, injections of tuberculin and thyroid extract and bacterio-proteins, intravenous saline injections, injection of salicylates, etherisation.

As remarkable exceptions to this list, the absence of leucocytosis should be noted among infectious diseases in typhoid fever, malaria, measles and rôtheln, and tuberculosis. In typhoid fever and measles without complication there is, indeed, a leucopenia in which the polymorpho-nuclear neutrophiles are chiefly involved.

*In uncomplicated tuberculosis, whether incipient or miliary, and in meningitis, peritonitis, ostitis and periostitis, pleurisy and pericarditis of tubercular origin, there is no increase in the number of white cells.*

A glance at these lists will suggest many valuable possibilities in differential diagnosis.

1. Rôtheln is sometimes very difficult to distinguish from scarlet fever. But a count of the leucocytes, during an epidemic of rôtheln, might save many patients the needless lengthy isolation that the risk of scarlet fever demands, while it might save a rôtheln case being placed in a scarlet fever ward with all its risks, and with the unhappy results of which most of us must be aware.

2. A blood film would be a great aid, in the presence of a leucocytosis, in determining the non-tubercular character of a serous inflammation or of a meningitis.

3. It would settle the doubt between typhoid and malaria by the discovery in the red cells of the malarial organism, or between typhoid and pyæmia, or typhoid and appendicitis,

or between an inflammatory disorder attended by pus formation and typhoid, by the absence of leucocytosis in the case of enteric fever, and its presence in all the others.

4. In typhoid fever the occurrence of leucocytosis would point to the presence of a complication, some secondary septic process or abscess formation, or would affirm the occurrence of perforation.

5. In an appendicitis in which the question of operation seemed difficult to settle, the arbitrament of a leucocyte count would be a justifiable procedure, an increasing leucocytosis indicating suppuration.

These are the most obvious conclusions that *a priori* might be drawn from the lists that have been given, and there is abundant experience to prove their reliability, and valuable suggestions of a similar kind arise from a more elaborate scrutiny of them. But enough has been said to indicate their usefulness.

6. The leucocytosis of malignant disease is, unfortunately, not a reliable quantity. In small tumours of slow growth it may be entirely absent. In certain situations the disease may even produce a leucopenia by interfering with the ingestion or absorption of food, as in cancer of the œsophagus. On the other hand, a rapidly growing malignant tumour, specially in a glandular organ, accompanied by metastases, may produce changes in the blood as profound as pernicious anæmia. While, therefore, the absolute diagnostic value of this sign is small, there are very many cases in which the evidence of blood film might be of great value when considered in relation to other facts of the case (see p. 282). In a case of admitted cancer, say within the abdominal cavity or pelvis, where the question of propriety of operating was difficult to settle, the presence of marked leucocytosis would tell against operating.

7. The case of pneumonia deserves to be set in a position of special prominence. While a blood examination in pneumonia is not enough to settle by itself the diagnosis, as in leukæmia, there is probably no other disease in which it is more valuable. In pneumonia, from the very commencement, a leucocytosis is present, with certain as significant exceptions. It continues throughout the period of pyrexia, and it begins to decline at, or shortly before, the crisis. If resolution be delayed, and suppuration or gangrene occur, the decline does not set in. The degree of leucocytosis is an index of the degree of severity of the attack. But when the attack is so violent as simply to overwhelm the patient, or when the patient is so inherently deficient in resistance as to fail to make any stand against an

attack, even though it be of no more than moderate severity, leucocytosis does not appear.

Thus (1), the decision in a suspected case of pneumonia may be made by means of a blood examination before the physical signs become conclusive, (2) the severity of an attack may be gauged and a prognosis made, (3) the advent of the crisis recognised, or (4) the occurrence and, to an extent, the nature of a complication recognised. It is the polymorpho-nuclear forms that are specially increased, eosinophiles and small lymphocytes actually diminishing.

The illustrations that have been given, it will be noticed, refer only to the fact of an increase above the normal in the total number of white cells.

In the earlier part of this paper the diagnostic value of a percentage determination of the varieties of leucocytes has been abundantly illustrated in the case of splenic leukæmia. In lymphatic leukæmia it may be the small or the large hyaline cell that predominates, while it has been noticed that eosinophilia occurs specially in bronchial asthma, bone affections, such as sarcoma of bone and osteomalacia, in skin affections, such as pemphigus and psoriasis, in certain diseases of the female genitalia, and in some sympathetic nerve diseases, such as exophthalmic goitre.<sup>1</sup>

<sup>1</sup> Anyone wishing a fuller account of this subject will find it in *The Clinical Examination of the Blood*, by Cabot (Longmans, Green & Co., 1897); *The Blood: How to Examine and Diagnose its Diseases*, by Coles (Churchill, 1898); and the article, "Die Anæmie," in vol. iii of *Nothnagel's Specielle Pathologie und Therapie*, by Ehrlich and Lazarus, which, since this paper was written, has been published in an English dress, by Myers, under the title *The Histology of the Blood—Normal and Pathological* (Cambridge University Press, 1900). In these volumes, also, a full bibliography will be found.

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## CURRENT TOPICS.

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GLASGOW UNIVERSITY: CHAIR OF CLINICAL MEDICINE.—Five gentlemen have made application for this appointment, four of them being resident in Glasgow, and the remaining one in London. The University Court meets on the 4th inst. to make the appointment.

HAWKHEAD ASYLUM, CROOKSTON.—Mr. A. Stevenson, M.B., Glasgow, has been appointed Junior Assistant Medical Officer.

MEETINGS OF SOCIETIES.

GLASGOW MEDICO-CHIRURGICAL SOCIETY.

SESSION 1899-1900.

MEETING XI.—6TH APRIL, 1900.

*The President, MR. H. E. CLARK, in the Chair.*

I.—CASE WHICH WAS OPERATED UPON FOR CICATRICIAL COMPRESSION OF THE BRACHIAL PLEXUS, CAUSING TOTAL PARALYSIS OF THE ARM, AND IN WHICH FUNCTION HAS NOW BEEN ALMOST COMPLETELY REGAINED.

BY DR. ROBERT KENNEDY.

The patient, a man, aged 47, on 26th November, 1898, while intoxicated, fell down a stair and sustained a dislocation of the left shoulder-joint, and fracture of the surgical neck of the left humerus.

He was admitted to Dr. Patterson's wards in the Western Infirmary, where the dislocation was reduced, and the fracture set and kept fixed for six weeks. At the end of that time it was noticed that there was very marked atrophy of the deltoid, biceps, triceps, and muscles of the fore-arm. The atrophy did not improve, but became even more marked, and on 2nd February, 1899, about ten weeks after the accident, the following was his condition:—There was great muscular atrophy from the deltoid downwards, but, from the elbow down to the hand, the atrophy was masked by cedema. There was a bulky mass of callus to be felt at the surgical neck of the humerus. The brachial and radial pulses were imperceptible, yet the circulation under the nails was good.

Voluntary movements were lost over the entire arm, which hung perfectly useless by his side, the only movement which he could communicate to it being an antero-posterior swinging motion, from the action of the pectoralis and latissimus dorsi. Abduction, however, was impossible.

Electrical examination of the muscles showed that the faradic irritability was lost in all the muscles, and the galvanic reactions showed the anodic closing contraction to be greater than the kathodic closing contraction, and sluggish.

Sensation in the hand and lower half of the fore-arm was



absolutely lost for touch, pain, and thermic difference. In the upper half of the fore-arm, sense of touch was obtusely present, but the sense of pain was absent. From the elbow upwards, sensation gradually improved.

It was clear that the nerves had become involved in the callus of the fracture, and, as the atrophy was progressing so rapidly, further delay was useless. I therefore laid open the axilla by an incision 5 or 6 inches long. A greatly distended vein—the basilic—was met and held aside, and it was then found that the vessels and the cords of the brachial plexus and nerve trunks arising from them were all bound down to the callus by dense cicatricial tissue. The brachial artery distal to this mass was scarcely pulsating, so greatly was it compressed. From this mass the various structures were cut out and liberated. The internal cutaneous nerve was the first to be separated, next the veins, which were very much distended, and had therefore to be very carefully dealt with on account of the thinness of their walls. They were held to the one side. The median nerve was then isolated and separated upwards, till it passed into its two heads of origin. The separation was then continued along the outer head till the outer cord of the plexus was reached, which was then also dissected out. The musculo-cutaneous nerve was then dealt with in its turn, and was so extensively adherent that it had to be cleaned right into the coraco-brachialis. The inner head of the median was then traced up and freed, till it passed into the inner cord of the plexus, which was next dissected up till free. From this cord the ulnar nerve was traced and separated out till it also was quite free and movable. The involvement of these nerves was through a distance of more than three inches. The axillary artery was then separated from its adhesions, and it was now observed to be pulsating strongly. It was held out of the way, and the posterior cord of the plexus, with the musculo-spiral, subscapular, and circumflex nerves all freed from their adhesions, and, indeed, the subscapulars had to be separated out right up to their muscles. The nerve to the deltoid was adherent almost to the point of its disappearance through the quadrilateral space.

The hæmorrhage throughout this operation was slight, and only one ligature was applied. The operation lasted one hour and ten minutes, but time was lost, as the patient on three occasions stopped breathing, and artificial respiration had to be resorted to before respirations recommenced. As regards the operation wound, all that requires to be said is that it healed by first intention.

Next day some sensation had returned to the hand and fore-arm, the sense of touch being present, but no sense of pain. By the third day it was much improved, and localisation was correct.

The first sign of voluntary power in the arm was manifested on the thirteenth week after the operation. By the sixteenth week voluntary power had returned to the deltoid, and to the flexor and extensor muscles of the arm, and to the flexors and extensors of the fore-arm, which could just move the fingers.

Improvement has slowly but steadily advanced, and, now, at fourteen months after the operation, sensation is quite recovered for the senses of touch, pain, and difference of temperature. The atrophy has in great part disappeared except in the hand, and voluntary power is good in all the muscles except in the small muscles of the hand. He can thus raise the arm to the full extent, and has perfectly free movements at the shoulder-joint; he can flex and extend at the elbow; supinate and pronate, flex and extend at the wrist, and flex and extend the fingers. He can lift a chair with his hand and hold it up above his head at arm's length. His grasp is fairly good, and all that now remains to recover is the power of the small muscles of the hand, and, as the faradic irritability of these is now returning, it is probable that these also will, in a few months more, quite have regained their power.

II.—SECOND CASE OF BRACHIAL PLEXUS PARALYSIS, IN WHICH THE COMPRESSION WAS DUE TO A LARGE AXILLARY ANEURYSM, AND IN WHICH ANTYPHLOP'S OPERATION WAS FOLLOWED BY COMPLETE RESTORATION OF SENSATION AND PARTIAL RESTORATION OF MOTION.

By DR. ROBERT KENNEDY.

The two photographs shown were those of a boy, aged 14, whom I saw first on 12th August, 1898. He complained of great pain in the armpit and in the arm, of loss of power in the entire arm, and of loss of sensation in the hand and fore-arm. These symptoms had commenced six weeks previously, and he attributed them to the fact that at that time he had fallen asleep with his arm hanging over the back of a chair. He slept in that position for an hour, and, on awakening, found the arm swollen, sensation dulled, voluntary movements lost, and great pain in the arm and in the armpit. No improvement followed, but the condition became steadily

worse. When I saw him he had absolutely no voluntary power in the muscles of the arm; there was marked atrophy of the deltoid and of the muscles of the arm. The only movement which he could execute with the arm was an antero-posterior swinging motion from the action of the pectoralis and latissimus dorsi, exactly as in the first case. Otherwise, the arm was completely paralysed.

Sensation was in great part lost. Obscure sense of touch resulted when certain parts of the hand and fore-arm were pricked with a needle, but no sense of pain was thereby produced. Obscure sense of pain on pricking with a needle was present above the elbow, but it was by no means sharp.

In the axilla there was a swelling about the size of a large cocoanut. It bulged the floor of the axilla downwards, pushed the pectoralis forward nearly to the nipple line, and ascended to within an inch of the clavicle. It was semi-fluctuant, and gave an expansile pulsation, and a loud bruit could be heard on auscultation, the pulsation and bruit ceasing when the subclavian artery was compressed. The brachial pulse was very indistinct, and the radial scarcely perceptible. The boy kept the shoulder raised by the trapezius, and supported the arm with his left hand in order to take the pressure off the aneurysm and thus relieve his pain.

His general condition was bad. He was ill-nourished, and usually covered with sweat. His pulse was rapid, and the pain was intense and almost constant. He had not had more than snatches of sleep for weeks.

The diagnosis of aneurysm being perfectly clear, I decided to operate by Antyllus' method. Apart from the question of curing the aneurysm by merely tying the subclavian, I chose this operation, as it was desirable on account of the paralysis to relieve the pressure as quickly as possible, and not to leave a tumour containing blood-clot, which would only very slowly have been absorbed.

The sac was therefore exposed by an incision which commenced near the middle of the clavicle, and was carried down over the swelling to the inner side of the arm. Part of the great pectoral muscle was then lifted up and divided, and the sac of the aneurysm was then seen to encroach on the third part of the axillary artery. The pectoralis minor was then divided, and the second part of the axillary artery exposed, double ligatured, and cut. The sac of the aneurysm was then isolated, and was found to be spindle shaped, and over it were seen, tensely stretched and flattened out, all the large nerve cords of the brachial plexus and the nerves springing from

them. The sac was then torn open, and the blood sponged away. It was then found that arterial hæmorrhage was copious from the torn distal end of the artery. This was immediately controlled by compression of the subclavian, and its source was clearly from collateral circulation carrying blood to the brachial artery, which blood then issued from the cut distal end. The distal end of the artery was ligatured, and all hæmorrhage then ceased. The cavity of the sac was large enough to have contained a large orange. The divided muscles were then sutured and the wound closed.

As regards the operation, there is nothing to state further than that the boy made a rapid recovery, and was able to leave the nursing home in a fortnight, with his aneurysm cured, and his general health greatly improved.

As regards sensation, this was markedly improved on the day following operation, and gradually underwent further improvement until it was as perfect as in the sound arm.

His condition eleven weeks after the operation was as follows:—Sensation was perfectly recovered both for touch and pain. His localisation of touch was quick and correct. Voluntary movements were now commencing to return. The deltoid had increased considerably in bulk, and, when the boy abducted his arm, which he could do to the extent of 45 degrees, the muscle could be felt to contract. The biceps and triceps had also recovered power, and were able to flex and extend the fore-arm.

Although the local improvement was progressing quite satisfactorily, the boy's general condition was very unsatisfactory. He was suffering from tuberculosis of the lung, which was making rapid progress, and was doubtless greatly hastened by the low state to which his health had been reduced by the want of sleep caused by the pain from which he had suffered for six weeks. From this affection he died on 17th November, 1898, *i.e.*, three months after the operation, and thus did not live long enough for perfect recovery of the muscles of the arm to take place.

III.—CASE IN WHICH THE ULNAR NERVE WAS SUTURED THREE MONTHS AFTER DIVISION, WHICH RECOVERED SENSATION ON THE DAY FOLLOWING OPERATION, AND IN WHICH THE USE OF THE HAND HAS NOW BEEN COMPLETELY REGAINED.

BY DR. ROBERT KENNEDY.

The patient, a boy, aged 15, was operated upon on 19th May, 1899.

Three months previously the patient fell while playing football, and sustained a cut with a piece of glass above the wrist on the right fore-arm. The doctor who saw him stitched several tendons, and found the ulnar nerve divided, and reported that he had stitched it also.

I saw him a short time before his admission to the Infirmary, and it was evident that the union of the nerve had failed. Thus, the right hand presented the characteristic attitude of ulnar paralysis, marked atrophy of the hypothenar eminence, and the palm hollowed out. Voluntarily, the fingers could not be flexed and extended more than to a slight degree, and the movements of abduction and adduction of the fingers were impossible. The nails presented the atrophic signs of ridging at their bases, and the skin of the palm was smooth and glossy, and the flexures greatly diminished. Sensation of pain, as tested by pricking with a needle, was entirely lost over the inner part of the palm and over the palmar aspects of the little and inner half of the ring fingers, but this test produced an obscure sense of touch. Temperature sense was lost. The electrical examination showed the reaction of degeneration in the affected muscles. He was therefore admitted to Dr. Patterson's wards, where I operated.

At the operation, all the structures in the neighbourhood of the scar were found matted together in dense adhesions, and on dissecting them out it was found that the central end of the ulnar nerve was attached to the distal end of one of the divided tendons of the flexor sublimis digitorum. The distal end of the nerve was discovered some distance off, lying in loose connective tissue, and not connected to any structure. The nerve was sutured, and the divided tendons repaired.

On the following day the note with regard to the condition of sensation is as follows:—On slightly pricking with a needle over the formerly insensitive parts the boy shouted out, evidently feeling pain with great acuteness, although his head was covered, and he was therefore unaware by sight of what was being done. This return of sensation was equally good over the inner part of the palm, and for the three inter-nodes of the little finger and inner half of the ring finger. The sense of touch over these regions was also nearly as distinct as normally.

At the end of fifteen weeks, atrophy was greatly diminished, there was no glossy appearance, and the flexures were well marked. The hypothenar eminence had greatly increased in bulk. Voluntary movements were now returning. He could bring both fingers into the palm, and his grasp was

good. He could abduct and adduct all the fingers. Faradic irritability in the affected muscles was well marked.

It is now ten and a half months since the operation, and the boy has for some time had the full use of his hand, and, a month ago, passed his examination by one of the surgeons of the 1st Lanarkshire Artillery Volunteers for field battery service.

IV.—TWO CASES OF SUTURE OF THE MEDIAN NERVE, ONE MONTH AND THREE MONTHS RESPECTIVELY AFTER DIVISION, IN WHICH THE USE OF THE HAND HAS NOW BEEN RECOVERED.

BY DR. ROBERT KENNEDY.

The first case, that of a shipwright, aged 37, was operated upon on 11th August, 1898, one month after the division of his right median nerve above the wrist. When seen two days before the operation, he had pain shooting down the thumb, forefinger, and middle finger, and inability to flex the forefinger and middle finger more than to a slight degree. The thenar eminence was much atrophied, and opposition of the thumb was defective. There was no loss of sensation. At the operation, the flexor carpi radialis and palmaris longus were found divided. The median nerve had a bulky and dense cicatrix on it, but it had been divided only two-thirds of its thickness. The portion of nerve with the cicatrix was excised, and the two ends brought together by suture and the divided tendons repaired.

Eight weeks after the operation, opposition of the thumb was possible to the tips of all the fingers, but there was much stiffness of the hand. The wasting of the thenar eminence had disappeared, and faradic irritability was normal. After this the stiffness of the hand disappeared gradually, and he returned to his old work, at which he has remained till now, nearly twenty months since the operation, earning his full wage.

The second case is that of a joiner, aged 37, whose median nerve was divided in the right fore-arm, just above the wrist, in November, 1894. Three months later he had atrophic manifestations in the index-finger and thumb, and outer half of the palm, with marked atrophy of the thenar eminence. Opposition of the thumb was impossible, and the hand was useless. He had total loss of sensation on the anterior aspects of the thumb, index and middle fingers, and outer half of the

palm. The median nerve was sutured, and, two days subsequently, he had sense of pain when pricked with a needle over the area formerly insensitive. At the end of the second month the atrophy of the thenar eminence had in great part disappeared, and opposition of the thumb was largely recovered.

A few months after the operation he returned to his work, having regained the use of his hand. It is now five years since the operation, and he still retains the use of his hand, and is able to earn his full wage. A full account of his case was published three years ago in the *Philosophical Transactions*, but I bring him forward now to show the remote result.

V.—ON THE CLINICAL EXAMINATION OF THE BLOOD, SPECIALLY BY MEANS OF DRIED AND STAINED FILMS.

By DR. J. M'GREGOR-ROBERTSON AND DR. J. SOUTTAR M'KENDRICK.

Dr. M'Gregor-Robertson and Dr. M'Kendrick's paper appears as an original article at p. 272.

VI.—THROMBOSIS OF THE MESENTERIC VEINS IN ENTERIC FEVER.

By DR. T. K. MONRO AND DR. CHARLES WORKMAN.

T. H., steelworker, æt. 18, was admitted to the Royal Infirmary, under the care of Dr. Monroe, on 21st February, 1900, complaining of pain in the left side. About a fortnight previously, whilst at his work, he had been suddenly seized with giddiness and severe pain in the head and abdomen. On the next day he felt weak and began to cough, and to suffer, on coughing and on breathing deeply, from a sharp pain on the left side of the chest. Two days before admission he got out of bed, and managed to work for an hour and a half, but had then to take to bed again. On admission, the symptoms included a severe stitch in the side; cough, especially troublesome at night; night sweating, headache, anorexia, constipation, and a furred tongue. The abdominal pain had ceased.

The temperature that evening was 104°, pulse 96, and respirations 28. For a considerable time thereafter the feature of the case—with the exception of the pyrexia, which was of a rather irregular type—continued to be of a very negative character. Thus, in the case of the lungs, the only abnormal signs were an occasional dry râle and a distant and

rather fine crepitus over the lower part of the left side. The latter was heard repeatedly in the course of the illness, and, as it was associated with the stitch in the same side, it was attributed to pleuritic friction. It is noteworthy, however, that at the autopsy absolutely no evidence of present or past pleurisy could be detected. The examination of the heart and of the urine was also negative.

About a week after admission a few rose spots were noted on the back. There was a good deal of sweating; the pupils were large; the bowels were constipated; cough continued; there was the least possible tenderness in the abdomen; pneumococci were found in the sputum. Examination of the blood by Vidal's method gave a negative result.

About a week later (9th March) an intestinal evacuation had the colour of pea-soup. There was still slight abdominal tenderness. There was no obvious enlargement of the spleen.

On the 13th March, after the bowels had been loose for a couple of days, some dark blood was observed in a motion. The tongue was clean. There was still tenderness in the lower part of the abdomen, especially towards the left side. Epistaxis was an occasional symptom. Shortly afterwards talkative delirium set in, especially at night. The pea-soup evacuations continued, and urine and fæces were passed into the bed.

On the 21st March a large quantity of blood was passed into the bed. There was marked pallor and abundant perspiration, and the tongue was dry and hard. There was marked trembling of the hand.

On the 22nd a soft solid evacuation, which contained little or no blood, included a solid mass, which was apparently a slough from the intestine. About half an hour later patient complained of crampy pains in the lower abdomen, said he felt faint, and drew up his legs. He was seen by Mr. Clark, along with Dr. Monro, two hours afterwards, when it was decided that the abdominal symptoms were not so pronounced as to warrant an operation. After these symptoms set in, there was a fall in the temperature, pulse, and respiration. For the next two days the general condition was encouraging; for instance, patient was able to ask for and use the slipper. The splenic dulness was considerably increased.

On the evening of the 24th he became subject to attacks of extremely severe abdominal pain, associated after a time with sickness. Moderate fever was present. The pain was all over the abdomen, but was specially severe just below the umbilicus; it was not affected by slight pressure with the



hand. The abdomen was moderately distended. In the course of the ensuing night three evacuations were passed, one of which was bloody.

Patient died from exhaustion on the 25th March, or about six and a half weeks from the commencement of his illness.

*Post-mortem* (27th March).—The body was greatly emaciated. On laying open the peritoneal cavity, the cæcum, with about 20 inches of the ileum and the ascending part of the colon, was seen to stand prominently forward in the lower part of the abdomen, and to be in a condition of intense venous engorgement, so that these parts seemed almost in a gangrenous condition. The tissue, however, was of fairly firm consistence, and not necrosed, the appearance of gangrene being only in colour, and due to the great congestion. Some of the arteries of the mesentery leading to that part of the bowel were examined; but these appeared empty and healthy, while the mesenteric veins were filled with blood-clot. It would therefore appear that the venous hyperæmia was the result of thrombosis of the mesenteric veins. The patches of Peyer were generally ulcerated and sloughing, and many ulcers were present also in the cæcum. These had undergone necrosis, so that in some the peritoneal coat was exposed, though no actual perforation could be found, and there was no fæcal matter in the peritoneum.

The spleen and lymphatic glands were much enlarged and congested; the liver was pale and soft, showing cloudy swelling; the stomach, duodenum, jejunum, and pancreas were healthy; the heart was a little atrophied, but otherwise healthy; the lungs were very emphysematous.

The *post-mortem* appearances in this case were characteristically those of enteric fever, with the addition of a most remarkable engorgement, especially of the mucous membrane of the lower part of the ileum and of the cæcum.

Dr. Workman was at first inclined to think that this was an infarction resulting from embolism of the mesenteric artery; but, on careful examination of its branches, he could find no sign of this, and as the mesenteric veins were found engorged and filled with blood-clot, he concluded that the condition was one of venous congestion, the result of thrombosis of the mesenteric veins. There was no evidence of a general necrosis of the congested portion of bowel, and, though it was considerably swollen, it was of normally firm consistence. The vermiform appendix showed similar engorgement, and a number of typhoid ulcers were present in it.

*Note.*—The rarity of thrombosis of the mesenteric veins in enteric fever may be judged of by the fact that it is not alluded to by Murchison in his treatise on the *Continued Fevers of Great Britain*, by Keen in his work on the *Surgical Complications and Sequelæ of Typhoid Fever*, or by Hare in his monograph on the *Medical Complications, Accidents, and Sequelæ of Typhoid or Enteric Fever*. Infiltration of the mucous membrane of the small intestine with bloody fluid, with a reddish-black colour, has been noted, generally in cases associated with hæmorrhage (*Continued Fevers of Great Britain*, third edition, 1884, pp. 616, 617).

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## MEETING XII.—20TH APRIL, 1900.

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DR. CHARLES WORKMAN *in the Chair*.

### I.—CASE OF ENDOCARDITIS OF THE TRICUSPID AND MITRAL VALVES.

BY DR. CHARLES WORKMAN.

The patient, a girl, aged 16, a machinist, had been under the care of Dr. J. Lindsay Steven, and the *post-mortem* was made on 20th April, 1900. There was anasarca and ascites, with great oedema of the lower extremities; the pleuræ were very adherent to the pericardium, and this to the heart wall. The aortic and pulmonary curtains were competent, and, except for a little thickening of the aortic, they appeared healthy. The tricuspid curtains were greatly thickened, and the orifice had a circumference of only 70 to 80 mm., instead of 135 mm. The mitral also showed great thickening, and measured only 60 mm. Both auricles were greatly enlarged, and the left had a number of calcareous plates in its wall. Both ventricles were dilated and hypertrophied, so that the heart weighed 20 oz. The aorta and the coronary arteries presented healthy characters. The liver was in a condition of monolobular cirrhosis, and much congested; the spleen and the left kidney showed infarctions; the spleen was somewhat enlarged; and all the abdominal organs were congested.

From the fact that the tricuspid valve was so markedly

affected by the chronic endocarditis, it is probable that the disease had commenced during intra-uterine life. In my experience, we only rarely find the tricuspid involved in a chronic endocarditis.

The hypertrophy of the heart was partly accounted for by the pericarditis, which was well marked.

## II.—TWO CASES OF EXCISION OF THE GASSERIAN GANGLION FOR EPILEPTIFORM NEURALGIA.

BY DR. J. CRAWFORD RENTON.

Dr. Renton read notes of two cases of excision of the Gasserian ganglion for epileptiform neuralgia, with recovery in both cases. The high method of operation was adopted by trephining the temporal bone, and raising the dura carefully down as far as the ganglion. The hæmorrhage was considerable, but by patience it was controlled by gauze pressure.

The middle meningeal artery gave no trouble in either case; the superior and inferior maxillary divisions of the fifth nerve, coming from the ganglion, were drawn out of their foramina and divided, the ganglion being raised and pulled away. The ophthalmic division of the fifth was not interfered with, as troublesome eye-symptoms are apt to follow its division. Both patients made good recoveries, it being twenty-two months since the one operation, and thirteen months since the other.

Both cases illustrated the typical appearances of epileptiform neuralgia, as many as twenty attacks of intense pain and spasm taking place in an hour, and requiring 3 to 4 grains of morphia to subdue them.

Dr. Renton urged an earlier resort to this operation, as it affords such complete relief, and the small amount of paralysis and anæsthesia left does not inconvenience the patient.

## III.—ON SOME OF THE DIFFICULTIES MET WITH IN THE SURGICAL TREATMENT OF GALL-STONES, ILLUSTRATED BY TWO CASES.

BY DR. G. H. EDINGTON.

Dr. Edington's paper will be found as an original article in our issue for September, 1900, at p. 161.

## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY,

SESSION 1899-1900.

MEETING VIII (*continued*).—14TH MAY, 1900.*The President, DR. THOMAS BARR, in the Chair.*VI.—CARD SPECIMENS (*CONTINUED*).

BY MR. G. H. EDINGTON.

2. *Further portions of abnormally thick ribs, resected in a case of chronic empyema.*

The former specimen from this case was shown at a meeting of the Society on 9th May, 1898, and a description was published in the *Glasgow Medical Journal* for August, 1898.

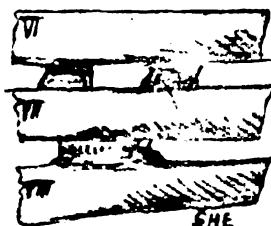


FIG. 2.

Sixth, seventh, and eighth ribs, outer surface, at seat of bony adhesions.

The former operation consisted in resecting portions of the fifth and eighth<sup>1</sup> ribs, and was performed in February, 1898. Owing to the cavity not closing, a further operation was carried out by Professor Hector Cameron in April, 1899; this consisted in resecting portions of ribs in the axillary region, from fifth to eighth inclusive. At the operation some difficulty was experienced in elevating the periosteum, and still more in dividing the bone with the pliers. The sixth, seventh, and eighth ribs were adherent to one another, about mid-axillary line, by, in the first case, two small bony bridges, and in the second by one such. These were divided by the pliers in the course of the operation, in which each rib was removed separately and sub-periosteally. The abnormal

<sup>1</sup> Misprinted "sixth."

breadth of the ribs from within outwards is well shown in Fig. 3 (p. 300); the external appearance with the connecting bridges is seen in Fig. 2 (p. 299). The subcostal groove is quite well marked in the fifth, and is present even to a greater

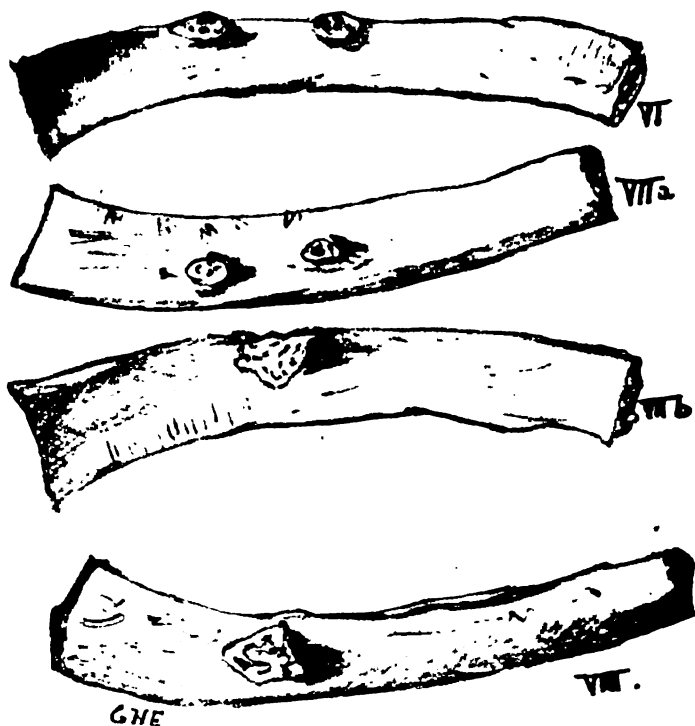


FIG. 3.

Showing dimensions of ribs and extent of bridges—VI, under surface of sixth rib; VIIa, upper surface of seventh rib; VIIb, under surface of same; VIII, upper surface of eighth rib. The posterior extremity of eighth rib corresponds to seat of original resection (left of illustration).

extent in the succeeding ribs. The measurements of the specimens are as follows:—

5th rib,	9.3 cm.	in length,	1.25 cm.	in breadth anteriorly,	1.5 cm.	posteriorly.
6th "	13.1 "	"	1.5 "	"	1.8 "	"
7th "	12.5 "	"	1.8 "	"	2.18 "	"
8th "	12.5 "	"	1.25 "	"	2.18 "	"

*Clinical summary.*—Catherine R., aged 19, was admitted to the Western Infirmary in February, 1898, with a discharging sinus on the right side of the chest. Two years

before admission she began to suffer from pain in the right side. This became worse, and necessitated her lying up four months later. Thirteen months before admission her medical

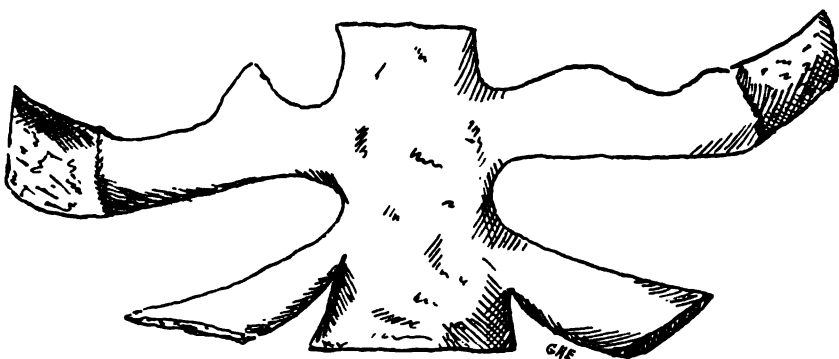


FIG. 4.

Irregularity of costal cartilages.

attendant found that she was suffering from empyema, which he treated by incision. The wound continued to discharge. She had occasionally some hæmoptysis. On admission she

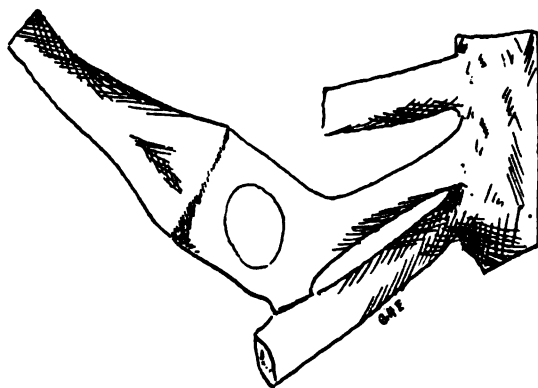


FIG. 5.

Perforation of abnormally broad costal cartilage.

had slight cough, and there was some dulness at the base of the right lung, with tubercular respiratory murmur, accompanied by coarse crepitant râles. A few days later, Dr. Cameron resected portions of the fifth and eighth ribs, washed

out the cavity, and inserted drainage-tubes. She was dismissed at the end of three months with the sinuses still open, but with diminished discharge. The sinuses continued to discharge, but she felt very well till January, 1899, when the quantity of discharge became much greater. This continued, and she was readmitted to the infirmary in February of that year. It was found that, in spite of some falling-in of the chest wall, there was still a cavity between it and the lung, and thoracoplasty was therefore performed (early in April).

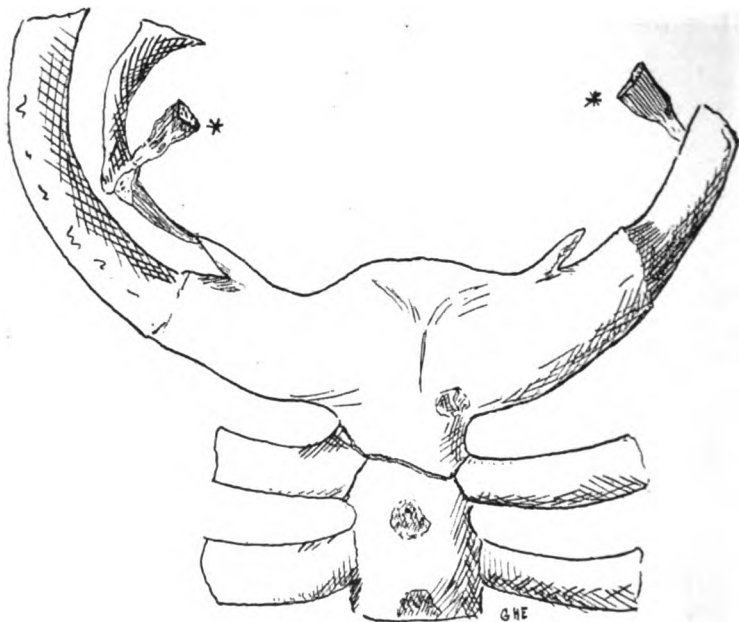


FIG. 6.

Cervical rib.

### 3. Specimens illustrating congenital abnormalities of ribs and costal cartilages.

(a) *Irregularity of upper margin of costal cartilages of third ribs.*—The costal cartilage of either rib measures 5 cm. in length. That of the *right* presents, on its upper margin, a distinct process measuring 1.5 cm. at its base, and narrowing to a point. The vertical height of the process measures nearly 1.25 cm.

The *left* cartilage presents some irregularity, but not so marked as to form a process. The irregularity takes the

form of a rising up of upper margin at a point situated to the inner side of the middle of the cartilage. The vertical measurement of the cartilage is as follows:—External to the elevation, 1.25 cm.; internally, 1.5 cm.; and in the line of elevation, 1.8 cm.

The specimen, which was obtained from an adult, is illustrated in Fig. 4 (p. 301).

(b) *Perforation in costal cartilage close to its origin from the fifth rib.*—The fifth rib on the right side is of normal size till a point is reached about 5 cm. from its anterior termination. Here the vertical depth of the rib gradually increases from .9 cm. to 2.18 cm. at the costo-chondral junction. The outer surface of the last 5 cm. of the rib presents a concavity in its long axis—an approach to a division of the rib.

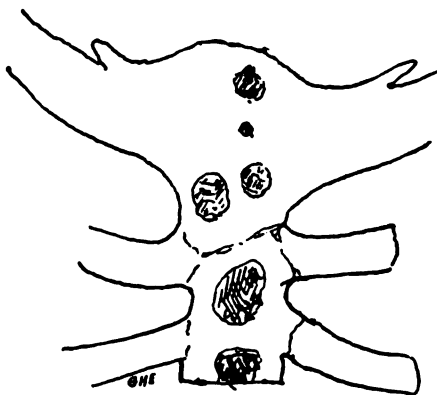


FIG. 7.

Posterior view of Fig. 6, showing centres of ossification in the manubrium sterni.

The cartilage has a vertical measurement of a little over 2.5 cm., and is pierced by an oval aperture, the long and short diameters of which measure 1.8 and 1.25 cm. respectively. It articulates with the cartilage of the seventh rib at a distance of 4.3 cm. from the sternum, after which it assumes normal shape and size, and joins that bone (see Fig. 5, p. 301).

The gap in the cartilage contained muscular fibres. The specimen was obtained from a subject aged about 12.

(c) *Cervical rib on right side; bilateral processes from first costal cartilage.*—The supernumerary rib in this specimen is situated above the first rib on the right side. The part preserved presents posteriorly characters similar to those of the first rib, being flattened from above downwards, and of almost



equal breadth to the dorsal rib. It narrows very rapidly, however, and anteriorly ends in a small pointed cartilage about 1·8 cm. external to the termination of the normal first rib. From the extremity of its cartilage a fibrous band passes forwards and inwards, to be attached to a cartilaginous process which arises from the upper margin of the first costal cartilage, a little external to the manubrium. The supernumerary was attached to the first rib by two layers of aponeurosis, the fibres of which had an arrangement similar to that of the intercostal muscles. These aponeuroses blended anteriorly

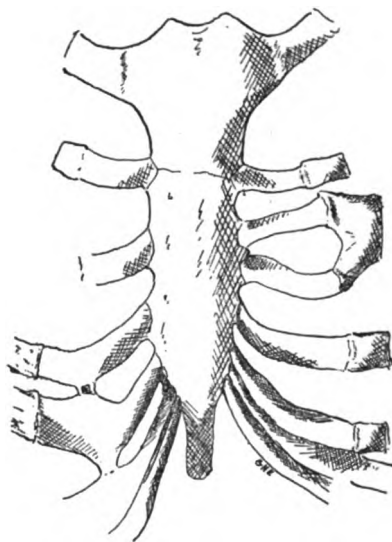


FIG. 8.

Anterior view of specimen (d).

with the fibrous band which connects the rib with the cartilaginous process.

The first left costal cartilage presents a process directed outwards, similar to that already described on the right side.

The *scalenus anticus* (\* Fig. 6, p. 302) is inserted into the first rib on the left side, and into the supernumerary rib-cartilage and fibrous band on the right.

The *manubrium* is joined to the body of the sternum by fibrous tissue in an oblique line, and presents on its posterior surface four centres of ossification, only one of which appears anteriorly (Fig. 7, p. 303).

The relationship of the supernumerary rib to the vertebral column was unfortunately not preserved.

The specimen was obtained from an infant (Royal Hospital for Sick Children).

(d) *Bifid third costal cartilage; abnormally broad fifth cartilage.*—The third rib on the left side has the vertical measurement of its anterior extremity abnormally increased (4.3 cm.) The bone also shows a slight degree of division into upper and lower portions. It is joined to the sternum by two costal cartilages (see Fig. 8, p. 304), which approximate one another gradually till that bone is reached. They enclose an elliptical space, measuring in its vertical and horizontal axes 1.5 cm. and 3.5 cm. respectively, and which contained muscular fibres. There is a further want of symmetry seen in connection with the fifth rib. On the left side the termination of the rib measures vertically 2 cm., and its cartilage is comparable to its neighbours, so far as size is concerned. On the right side the rib measures, at its junction with its cartilage, 2.5 cm., and the cartilage is increased in extent vertically so as to articulate with those of fourth and sixth ribs. The articulation with the fourth has been laid open as shown in the figure.

The outline of this cartilage resembles that shown in Fig. 5 (p. 301).

These specimens may be compared with two which occurred in the Children's Hospital in 1894, and which were shown to the Society during that session (see *Transactions*, vol. v, p. 137).

## OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

SESSION 1899-1900.

MEETING IX.—23RD MAY, 1900.

*The President, DR. ALEX. MILLER, in the Chair.*

### I.—SPECIMENS.

BY DR. JOHN EDGAR.

Dr. Edgar showed specimens removed each by abdominal hysterectomy:—

1. Myoma of uterus.

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2. Combined myoma and adenoma carcinoma of corpus uteri.
3. Adeno-carcinoma of corpus uteri.
4. Adeno-malignum of corpus uteri.
5. Sarcoma of corpus uteri.

## II.—AUSCULTATION IN THE MANAGEMENT OF LABOUR.

BY DR. ALEX. MACLENNAN.

Dr. Maclennan's paper will appear in a future issue of the *Journal*.

## III.—TUBERCULAR ULCER OF THE LEFT LABIUM MAJUS.

BY DR. A. W. RUSSELL.

Tubercular ulcer of the vulva is so rarely recorded that it seemed desirable to report a case that came under my notice recently, and to show a microscopic section of the specimen as well as the specimen itself.

The patient, a young married woman, 26 years of age, of healthy appearance and more than usually stout habit, consulted me about six months ago on account of a pretty constant, but not profuse, hæmorrhage, lasting about nine weeks, which she believed to be due to deranged menstruation. She had had one child, now 4 years old. About a year afterwards she began to be troubled with pruritus vulvæ, to relieve which she was apt to scratch herself. A year or so later she thought there was an undue hardness of the skin, which also showed signs of breaking.

In this way the ulcer began, and she never afterwards succeeded in quite healing it up, though she saw her doctor repeatedly, and used "dusting powder" (boracic acid), and even had it "burned." It is to be noted that it sometimes seemed to be getting well, and again broke out. There was at no time any pain. For a few weeks before I saw her it seemed to be growing more rapidly, and discharged more freely. At the time of my examination the ulcer was about an inch and a half in length and three-quarters of an inch in breadth; of the shape of a kidney, with concavity towards the middle line; and it was quite confined to the upper and anterior part of the left labium majus, and situated opposite the clitoris. The surface was flat and granular, covered with a thin layer of yellowish discharge, and the edges were only slightly prominent. The subjacent and surrounding tissues were dense.

These appearances suggested the diagnosis of epithelioma. The neighbouring glands did not seem to be affected. I removed it by incisions that were kept well clear of the infiltrated area. The wound healed up well, and when examined quite lately the scar and the neighbouring tissues were quite soft.

The microscopic section shows giant cells, and marked infiltration of small cells.

I have to thank Dr. Teacher for the section which he succeeded in cutting, after I had failed owing to the hardness of the tissue.

#### IV.—CASE OF CANCER OF UTERUS.

BY DR. ALEX. MILLER.

Mrs. A., aged 50, has had an irritating discharge for about two years. No pain. No hæmorrhage. General health excellent. Was curretted, with great relief. Microscopic examination of scrapings was made by Dr. J. H. Teacher, who characterised the growth as rather an epithelioma of the cervix.

In November last Mrs. A. was operated upon by Dr. Parry, who removed the uterus and appendages by combined vaginal and abdominal sections. Patient did well, and now (September) enjoys excellent health.

#### V.—CASE OF CANCER OF THE BODY OF THE UTERUS.

BY DR. NIGEL STARK.

Dr. Stark's paper appears as an original article at p. 267.

#### VI.—DECAPITATED FŒTUS.

BY DR. ROBT. JARDINE.

The operation of decapitation is an exceedingly rare one. Dr. Black; who, as you know, has been connected with the Maternity Hospital for upwards of twenty years, tells me that he had never seen it done before, and I have not found any records of a case in the books for thirty years back. There have been cases of decapitation where the body was pulled away from the head, and such cases are occasionally brought in, but these, of course, are accidental.

The patient was seen at her home, and brought in by Dr. Husband. The right hand protruded at the vulva, and the uterus was very firmly moulded round the fœtus. The child was dead. I found that the child was lying in the long axis of the mother, and not transversely. The back lay towards the right and front, while the head was flexed on to the chest, and the right shoulder occupied the brim. The neck was easily reached. The risk of turning was too great, so decapitation was done with Ramsbottom's sharp hook. It was hooked round the neck, with not much difficulty, from behind forwards. As the hook is very sharp, it easily cut through the neck somewhat obliquely. The body was easily pulled down by traction on the arm, and the head was immediately extracted by hooking a finger into the mouth, while Dr. Gibson applied suprapubic pressure.

#### VII.—TWO CASES OF PEMPHIGUS NEONATORUM.

BY DR. ROBT. JARDINE.

*Pemphigus neonatorum* is so rare a disease that notes of the two following cases may be of interest.

Mrs. A., a primipara, was delivered by me in January, 1898. She was in a bad state of health. During her pregnancy she had suffered from a severe cough, and the lungs showed evidence of tubercular mischief at the apices. She had suffered from night sweats. I delivered with forceps, as it was a persistent occipito-posterior case. The child, a male, was above the average size, and appeared to be quite healthy. By the third day large blebs began to appear on the legs, buttocks, arms, face, and neck. The hands and feet were affected on both palmar and dorsal aspects. The blebs quickly broke, and left large raw patches. In a day or two the child was in a deplorable state. The raw condition about the mouth prevented it taking its food, and the urine and fæces caused great irritation to the legs and buttocks. Snuffles were also present. Fortunately, death soon put an end to its sufferings.

I put it on 15 minim doses of liq. hydrarg. perchlor., and had the parts dusted with oxide of zinc and calomel.

The mother was very ill during this time, and she developed several of the blebs on the outside of the buttocks. She made a slow recovery.

In April of this year she was again confined. The child, a female, was much smaller than the first one. The labour was

easy and natural. The patient was very anæmic, more so than the last time. She was at once put on large doses of ammonia, citrate of iron, and arsenic. She was not allowed to nurse. During the second week of the puerperium she developed insanity of a religious melancholic type. For several days she was very restless and talkative, but gradually quietened down under large doses of bromide and chloral. Fortunately, she took nourishment freely, and we were able to build up her system. Her mind became quite clear in about ten days.

The child, although small, appeared to be perfectly healthy, and took its food well. It was put on diluted cow's milk. About the third day small blebs, the size of split peas, began to appear on the buttocks and legs. One appeared on the side of the head, and one or two on the arms. The feet and hands were not affected. The buttocks became copper coloured, and there was a slight attack of snuffles. The blebs were very small, and did not leave any large raw spaces, as in the first child. The child took its food well, and did not seem to suffer much in its general health. It was put on 15 minim doses of liq. hydrarg. perchlor., and the buttocks were dusted with oxide of zinc (1 oz.) and calomel (30 grs.) The condition quickly subsided, and in about a fortnight it was apparently all right.

I think there can be little doubt that syphilis is the cause here, and yet I have found no indications of the disease in the mother, and the father seems healthy enough. I have refrained from making any definite enquiries from the father, as in such a case it is easy to arouse suspicions, and perhaps wreck the peace of a happy home.

Syphilitic pemphigus is said to specially affect the soles of the feet and the palms of the hands. In the first case they were affected, but not specially, as the whole of the feet and hands were involved. In the second case the feet and hands escaped entirely.

Arsenic is claimed to be a specific in the simple form, but it must be given in large doses. In pemphigus neonatorum I should always be inclined to suspect syphilis, and treat it accordingly. I used the liq. hydrarg. perchlor. in preference to grey powder, as the bowels were loose. Syphilitic infants take large doses of liq. hydrarg. perchlor. without any indications of poisoning. At one of the dispensaries I saw an infant which, by a mistake, had been getting drachm doses three times daily for a week. It had not even salivated it.

## REVIEWS.

*A Text-Book of Physiology.* By WINFIELD S. HALL, Ph.D. Leipzig, M.D. Leipzig. With 343 Engravings and 6 Coloured Plates. London: Rebman, Limited. 1900.

THE author claims for physiology the position of an experimental and superstructural science, occupying a field quite as definite as anatomy, chemistry, and physics, the three foundations on which it is built, and, as a special feature of this book, the advantage of presenting the subject concretely within its own proper boundaries, and in its instructive connections with the sciences whence it is derived. To this end he has summarised in the introduction those principles of physics and chemistry which have a general application, and has prefixed to each chapter an abstract of the facts drawn from all three of the basic sciences which are to be applied in the succeeding text. In the introduction, there is also given an account of the development of physiology as a science, and of the special contributions made by philosophers of times past. In plan, the book is divided into two parts—General Physiology (dealing with the physiology of the cell and of contractile and irritable tissues), and Special Physiology (which includes nutrition, or the physiology of internal relations, moto-sensory activities or the physiology of external relations, and reproduction).

In the chapter on cytology, the main features of protoplasm and the phenomena of life are described; and among the many excellent plates may be specially mentioned those from Wilson's work on the cell in development and inheritance. The latest results of experimental research are well summarised in the chapter on the contractile and irritable tissues, and more especially as to the results of stimulation of muscle and nerve, and the general doctrine of the neuron and nerve function.

Of the part devoted to Special Physiology, it may be generally said that it bears evidence of original research, and thorough acquaintance with the work of others. Sound judgment is shown in the selection and arrangement of material, and while much must necessarily be passed over in a volume of 650 pages, yet a fair and accurate statement of the main principles of the science is presented in a clear and concise form. References are given to the most recent

physiological literature alike in journals, archives, and text-books, such as Schäfer's. Among many interesting and novel features may be noted the detail in which the structural formulæ and reactions of the various products of metabolism are worked out; the new discoveries with regard to absorption and internal secretion, and the functions of the cerebellum as to co-ordination and equilibration. Besides the general index there is a useful index of comparative physiology. The illustrations are numerous and excellent, as also the paper and typography.

It can be confidently recommended as a reliable and convenient manual for students, practitioners, and the general public.

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*Paralytic Deformities of the Lower Extremities: the Principles of their Surgical Treatment.* By E. NOBLE SMITH, F.R.C.S. Edin., L.R.C.P. Lond. With 51 Illustrations. London: Smith, Elder & Co. 1900.

THIS little work strikes the reader as being even more a record of what the writer has done in orthopædic surgery than a complete treatise on that subject. The work of others in this field is, however, recognised, and the volume is sufficiently full and systematic to be regarded as a small manual, so far as the lower limbs are concerned. The diseases and injuries which cause the deformities are not considered in detail; the aim is rather to take up in succession the principal types of deformity, and show what can be done in the way of adding to the powers and happiness of the sufferer. After dealing with the various operative procedures employed in orthopædic surgery, Mr. Smith discusses the deformities resulting from diseases of the spinal column and cord, brain, nerves, and muscles. An interesting paper, which was published in 1898, is reproduced in this volume—"A New Method of Restoring the Absent Function of Muscles in Infantile Paralysis." It had been previously known that division of the tendons of muscles which have undergone contracture after infantile paralysis, is frequently followed by improvement in the nutrition of the damaged and neighbouring parts of the limb. It accordingly occurred to Mr. Smith that tenotomy of the palsied muscle might result in still more direct benefit to that muscle itself. Cases are given to illustrate the striking results obtained from this operation. A later part of the volume is devoted to the scientific use



of mechanical apparatus. An appendix gives us cases in which benefit resulted from laminectomy for paralysis.

Altogether, the book is an interesting and creditable piece of work, and ought to be of value to both physician and surgeon.

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*A Practical Treatise on Diseases of the Skin, for the Use of Students and Practitioners.* By JAMES NEVINS HYDE, A.M., M.D., and FRANK HUGH MONTGOMERY, M.D. Fifth and Revised Edition. Illustrated with 111 Engravings and 24 Plates in Colors and Monochrome. London: Henry Kimpton. 1900.

To its enterprising publisher, this must be one of the most satisfactory works he has issued. Appearing first in 1883, and reaching a second edition five years afterwards, it appeared in its present guise (fifth edition) at the close of 1899, a volume which everyone concerned in its production may well contemplate with a sense of gratification.

A brief notice will suffice for a work which has already gained for itself so secure a position. The earlier pages are taken up with the anatomy and physiology of the skin, and with the symptomatology, etiology, pathology, diagnosis, prognosis, and therapeutics of cutaneous disease, all from a general point of view. The classification of skin diseases comes next. This is practically the one which was adopted in 1878 and revised in 1884 by the American Dermatological Association. It is a modification of Hebra's scheme. Cutaneous diseases are discussed, naturally, in the order of classification. Thus, we have, first, diseases of glands, then inflammations, hæmorrhages, hypertrophies, atrophies, new-growths, sensory dermato-neuroses, and, finally, parasitic affections.

No perfect classification is available to us, and no more can the text be regarded as satisfactory to everyone. For instance, in a work of this size, there ought to be an account of the rashes that may follow the use of enemata, a subject treated of in a paper published in this *Journal* last year, and noticed in the literature both at home and abroad.

For the benefit of those who possess one of the earlier editions, we may allude to some of the more important changes to be found in the present issue. New chapters have been written on Porokeratosis and Blastomycetic Dermatitis. The subjects more or less completely revised include General Etiology, General Therapeutics, Eczema, Purpura,

**The Alopecias, The Atrophies, Lupus Erythematosus, Mycosis Fungoides, The Neuroses, Xanthoma, Pellagra, Impetigo, Dermatitis Herpetiformis, Pigment Anomalies, Tuberculosis, Syphilis, and Mycetoma.** Twelve full-page plates and two engravings are new.

This admirable work is a valuable addition to any medical practitioner's literary capital.

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*Year-Book of the Scientific and Learned Societies of Great Britain and Ireland: comprising Lists of the Papers read during 1899 before Societies engaged in Fourteen Departments of Research, with the Names of their Authors.* Compiled from Official Sources. Seventeenth Annual Issue. London: Charles Griffin & Co., Limited. 1900.

THE present volume obviously fulfils more than one purpose, for while, on the one hand, it is of value as a book of reference, it is, on the other hand, a record of the actual work done in the past year by the societies; and not only so, but if it be compared with earlier issues of the same work, it indicates, to some extent, the progress that science is making from year to year. As is remarked in the preface, the work is a suggestive one to those who are interested in literature, since it gives a *résumé* of the "subjects which have occupied the most active intellects amongst us during the past twelve months." We recommend the volume to the notice of scientific workers.

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*Archives of Neurology and Psychopathology.* Vol. II—Nos. 3 and 4 (1899). Utica (New York): State Hospitals Press. 1900.

THE State Hospitals Press is doing an excellent and praiseworthy piece of work in publishing these *Archives*. Most of the present volume is taken up by three papers by L. Pierce Clark, who is a member of the medical staff of the Craig Colony for Epileptics at Sonyea, New York. These papers, which are collectively entitled "Clinical Studies in Epilepsy," are on exhaustion-paralysis in epilepsy, on paramyoclonus multiplex associated with epilepsy, and on hypertrophic infantile cerebral palsy and phocomelus associated with epilepsy. The studies are very elaborate, and abundantly illustrated.

Other contributions are—by P. A. Levene and I. Levin, on the absorption of proteids; by P. A. Levene, on some chemical changes in the developing egg, and on the chemical relation of colloid, mucoid and amyloid substances; by Richard Weil and Robert Frank, on the evidence of the Golgi methods for the theory of neuron retraction; and by Ward A. Holden, on the sequence of changes in the optic chiasm produced by acromegalia, as exemplified in three cases.

By an excellent arrangement, the volume includes a table of contents of previous numbers.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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### SURGERY.

By G. H. EDINGTON, M.D.

**On the Use of Inflammatory Excitants in Wound-treatment.**—G. Meyer premises the now generally recognised fact that in wounds only *relative* freedom from germs can be obtained. "Absolute" asepsis does not exist.

He points out that the *natural* healing of surface wounds is accompanied by a very moderate degree of inflammation.

He therefore proposes to excite a *mild* inflammatory action in the wound, with the object of attracting phagocytes. This renders the tissues bactericidal, and also hastens the infiltration of the blood-clot with leucocytes, thus preventing it, in its deeper parts, serving as a nutrient medium for the bacteria.

His method of treatment combines strict asepsis and the use of a mild inflammatory excitant. For sutured or markedly germ-free wounds he recommends tincture of iodine. For impure wounds he uses acetate of aluminium, which also he specially recommends in the form of warm, moist applications in deep suppurating wounds occurring in senile or broken-down individuals. —(*Centralblatt für Chirurgie*, 11th August, 1900.)

**Osteoplastic Amputation.**—The principle consists in the formation of an osteo-periosteal segment adherent to the soft tissues of the flap. One adapts this segment closely to the sawn surface of the bone, with which it unites. The resulting stump is as solid as the diaphysis itself.

The author claims for this method arrest of the longitudinal growth of the bone, thus avoiding conical stump.

He cuts two musculo-cutaneous flaps of unequal length. The long flap contains the bony segment or segments, and in the arm and thigh is cut from the outer surface, while in the fore-arm it is fashioned from the posterior.

The method consists in sawing through the bone transversely at the base of the long, and at the level of the margin of the short, flap. The periosteum is partly detached, and the bone is sawn longitudinally to a depth equal to the circumference of the shaft. A second transverse section of the shaft is made

at the upper end of the longitudinal cut, and the segment of bone is detached from the shaft, half of it remaining adherent to the flap. The periosteum of the shaft is further raised, and a third and last transverse section is made, by which means one extracts a cylinder (*rondelle*) of the bone. The segment in the flaps is then stitched across the cut face of the shaft, the raw surfaces of the bone being in apposition. Suture of flaps completes the operation. In the upper third of the leg the segment is taken from the outer surface of the tibia, in the lower third from the antero-external surface. In the fibula the segment is taken externally at all levels.—(Zamfirescu, *Rev. de Chir.*, August, 1900.)

**Chronic Proliferative Osteomyelitis.**—Kozlovsky narrates the following three cases:—

1. In 1892 he saw a man, aged 43 years. For six months the patient had observed a swelling of left femur. He was scrofulous as a child, but there was no syphilitic history. The swelling was of quick development, with pain in the bone, but without fever. The swelling was fusiform cylindrical, felt hard and resistant, and extended from above the knee to the groin and buttock. He diagnosed sarcoma of the femur, and this was apparently confirmed by exploratory puncture, the liquid so obtained being sero-sanguinolent, and containing both white and red corpuscles. Disarticulation at the hip was recommended, but refused. Another surgeon prescribed salt baths, with the local use of mercury, and the man underwent a complete cure.

This was, when compared with a case described by Kocher, in the author's opinion, a form of osteomyelitis.

2. A Jewess, aged 85, was seen in March, 1899. She enjoyed good health. She fell, twelve months previously, on the left elbow, but had already for two years experienced pain and difficulty of movement in the joint. These symptoms were increased after the injury, which caused a swelling to appear on the inner surface, slowly and without fever. At operation, one felt on the inner surface a thickening and deep fluctuation. The swelling was incised four months after its appearance. It was composed of hard, white, non-vascular tissue (like flesh of fish), and from 5 to 6 cm. thick, enclosing a little pus, which was watery and comparable to that of a cold abscess. At the bottom was the denuded surface of the ulna, in the periosteum of which the swelling had been developed. Its softened ventral part was scratched without finding a sequestrum. The cavity was drained, and there was a slow recovery.

Twelve months later the swelling disappeared, and the wound closed, the movements of the elbow and fore-arm remaining painful. He cites a precisely similar case by Bobroff, of Moscow.

3. A rustic, aged 9, with no history of scrofula or syphilis. Illness was of six months' duration. A large swelling of left femur developed slowly without fever, and comprised the whole length of the bone between its epiphyseal lines. Deep fluctuation was felt in front, and on inner side were sinuses leading to bone. Incision anteriorly showed, under the muscles, an infiltration, 4 to 6 cm. thick, of the hardness of wood, and formed of periosteum. Subperiosteally a cavity contained watery pus. The cavity wall was composed of fibrous and vascular tissue infiltrated with leucocytes. The whole diaphysis formed a sequestrum, the involucrum of which was very feeble. The cavity of the bone, opened by gouge, contained a reddish orange liquid, like fluid pus, in which fatty droplets were floating. The marrow was softened. The bony cavity and fistulæ were scraped with the spoon. The diaphysis was left *in situ*, to facilitate the formation of a sheath. Infiltration diminished slowly, and she went out cured after 152 days.

This manifestation of osteomyelitis may be due to feebleness of the micro-organisms combined with resistance of tissues.—(*Rev. de Chir.*, June, 1900.)

**Wound of the Heart—Suture of the Left Ventricle—Recovery.**—A young soldier attempted suicide by stabbing himself in the region of the heart. When seen six hours later he had very marked dyspnoea,

thready pulse, and subnormal temperature. A diagnosis was made of hæmothorax, with hæmorrhage probably continuing, penetrating wound of pleura and lung, and perhaps of heart and diaphragm. The author at once raised a large thoracic flap, comprising fourth, fifth, and sixth ribs, which he turned back into the axilla. The pleura was full of dark blood, which was evacuated. The lung was pressed up towards the vertebral column. There was, finally, a wound of the diaphragm, one of the anterior border of the lung, and one also of the pericardium, from which blood escaped into the pleura. The pericardial wound was soon slit up to a length of 4 cm. The sac was full of blood, and the finger introduced recognised a wound of the left ventricle. This measured 12 mm. transversely, and at each systole sent forth a jet of blood. A series of catgut stitches were inserted with difficulty. The hæmorrhage soon ceased, and the operation was completed by suturing the different wounds. Complete recovery ensued. The author insists on the necessity of exploration and of making a large flap. The heart should be seized during inspiration and in diastole. To avoid all chance of clotting, the sutures should not penetrate into the cavity.—(Fontan, report of the Soc. de Chir. in *Rev. de Chirurgie*, June, 1900.)

**Pneumotomy with Costal Resection, for a Wound of the Lung by a Revolver of Large Calibre—Cure.**—A man, aged 22, with history of previous good health, was wounded in the third left intercostal space. The wound bled profusely, and was closed by antiseptic plaster. There was no wound of exit. He was treated by absolute rest, application of ice, with a hypodermic of morphia and a sedative draught. Three days later there was considerable pleural effusion. Hæmorrhage from the wound had completely ceased, but he continued to feel weak, with high temperature and great dyspnœa. By the sixth day dyspnœa had become so marked that there was danger of his succumbing, and the following operation was performed:—Under chloroform anæsthesia, an exploratory puncture in the seventh space, in the region of dullness, showed blood effusion become purulent. Incision evacuated blood and pus. A portion of the sixth rib, measuring 3 cm., was resected, and the finger explored the pleural sac. A hard spot was felt in the lung. A flap was then turned up, and sufficient lengths of fifth and sixth ribs were resected. The indurated portion of lung was incised, and blood and pus were turned out. The ball, which was embedded in this region, was extracted by forceps, along with three sphacelated pieces of lung tissue. Hæmorrhage was arrested by absorbent gauze tampon, drainage-tubes were placed in pleural cavity, and the flap fixed down over the ribs. Ether injection and 500 grm. of artificial serum were given, and repeated on two following days. The operation lasted twenty minutes. The patient was completely cured in two months, no fistula remaining. The dressings were simply aseptic, and no lavage was employed.—(Christovitch, *Rev. de Chir.*, July, 1900.)

**Intermittent Fibrous Polypus of Rectum.**—A married woman, aged 38, came to the Hôpital Richât in August, 1898, with a tumour at the anus. It was larger than an orange, and of a uniformly red colour in its proximal and of a violet tint in its distal part. It was attached to the rectum by a pedicle, 3 cm. long by almost 2.5 cm. thick, the mucous membrane (rectal) over which was not ulcerated, but was thrown into folds by large vessels. The prolapse of the rectal mucosa had resulted from the weight of the mass. The tumour, which was pyriform, had a broad lower extremity of about 10 cm. in diameter, on which part was an ulcerated patch of the size of a two franc piece.

The tumour was very hard and inelastic, and had appeared one year previous in an intermittent fashion. When first observed it was of the size of the terminal internode of the thumb. She then had a child, and the tumour prolapsed, but was easily returned. During twelve months it appeared not more than three or four times, when at stool, and on each of these occasions

defecation was painful. At the same time there was obstinate constipation and abdominal pain.

In February, 1898, the tumour had become the size of an egg, and it bled when returned, so that she thought that she had piles. She only presented herself for advice on account of the difficulty in sitting, in going to stool, and in walking. On 22nd August, 1898, it came down suddenly when at stool. She could sit on one buttock only. Under local anæsthesia (cocaine, 1 per cent) the pedicle was ligated and cauterised, and the raw surface covered in by a flap of mucous membrane. The pedicle then retracted almost out of reach. She had remained well five months later.

Histologically, the tumour was a pure fibroma, with numerous well-formed vessels, but no unstriated muscle-tissue. The surface was covered with several layers of epithelium—superficial, flattened; deep, cubical. The epithelium showed papillæ, but there were no glands.

The author considers the case to be a rare one. The paper contains an exhaustive account of the literature of the subject, with *résumés* of cases of other observers.—(Pénaire, *Rev. de Chir.*, June, 1903.)

**Castration, or Resection of the Epididymis in Tuberculous Epididymitis.**—Lanz relates two cases of tuberculous epididymitis in which the testicle appeared to be healthy. For that reason, without prejudice to the extirpation of the epididymis along with the vas deferens, the question arose of preserving the testicle. That organ was split in the median plane, as in the case of the kidney, in order to make clear its integrity by inspection of the cut surface.

In the first case, that of a youth, aged 15 years, the testicular tissue proved to be normal, and the organ was replaced by suturing the albuginea. Till now (eighteen months) the part has remained well.

In the second case, on the other hand, several tuberculous nodules were found on section, and castration was performed.

He recommends this exploratory splitting of the testicle, especially in cases where a testicle has already been removed, and where we have tuberculous disease of the remaining organ.—(*Centralblatt für Chirurgie*, 25th August, 1900.)

**Symmetrical Lipoma of Plantar Arch, occurring in Families (Lipome Symétrique Familial).**—Ch. Féré narrates two cases, in women, aged 34 and 38, in whom there were lipomata in the plantar region. The patients were cousins-german, and he thinks that the occurrence is of interest as pointing to the appearance of *tumours* in families, quite apart from heredity.—(*Rev. de Chir.*, August, 1900.)

## DISEASES OF THE EAR.

By DR. WALKER DOWNIE.

**A Fatal Otitic Abscess in the Left Temporal Lobe of the Brain causing Word-Blindness; Operation; Autopsy.** By Herman Knapp.—A girl, 12 years of age, had had left-sided otorrhœa off and on since childhood. Eighteen months ago, while in the country, she had an abscess in her left ear, and there had been more or less discharge since. Four weeks before being seen by Dr. Knapp she had an attack of intense frontal headache, with nausea and vomiting. On 17th December she became unconscious, and had violent convulsions during the next six hours. Ice-bags were applied to the head, and the convulsions ceased. Next day the temperature was 101° F., and the pulse 100; movements and sensibility normal; pupils, backgrounds of eyes, sight, and field of vision normal; very scant

secretion in left ear; fundus of ear-canal not clearly seen, but free from granulations; slight swelling and tenderness of mastoid; optical amnesic aphasia pronounced. When an object was held up before her, and she was asked what it was, her face brightened with attention while she looked perplexed, and said, "I know what it is, but cannot name it." When told, she instantly and correctly repeated the word.

The diagnosis was "deep mastoid and epitympanic caries, epidermal and cerebral abscess, beginning meningitis," and operation was recommended.

The posterior and upper walls of the bony ear-canal were chiselled away, and the antrum and attic were laid bare. The latter was found packed with cholesteatomatous masses, which were thoroughly removed. The posterior cranial fossa was then exposed by chiselling and curetting away all the carious bone that separated it from the body of the mastoid. The dura and the sigmoid sinus showed no abnormality, nor was there either epidural abscess or external pachymeningitis. The upper wall of the attic, which was carious, was removed, and the dura of the middle cranial fossa exposed. A probe was passed into the brain through a discoloured area, without meeting with any resistance or eliciting blood or pus on withdrawal. The wound was then dressed, and the child's condition appeared to improve. On the sixth day the temperature rose, and in the evening she suddenly gave a shriek, jumped out of bed, and in a few minutes was dead.

At the *post-mortem*, with the brain *in situ*, nothing more was found than had been observed at the operation. After the brain had been removed, however, it was divided in the middle line, when a large quantity of thin, purulent, offensive liquid flowed out from the third and left lateral ventricles. Temporally from the lateral ventricle a large abscess cavity was situated, surrounded by a dense white capsule, which had ruptured in front and towards the lateral ventricle behind. Its contents were similar to those of the ventricles, and the capsule of the abscess was surrounded by a zone of softened brain substance.—(*Archives of Otolaryngology*, No. 1, 1900.)

**The Physiologic Tests as Aids to the Differential Diagnosis of Lesions of the Ear which produce Deafness and Tinnitus.** By W. L. Ballenger, M.D., Chicago.—The amount of deafness and tinnitus, Dr. Ballenger holds, is usually in proportion to the nearness of the lesion to the labyrinth. Thus, the affections of the auricle produce but slight disturbances of the ear, cerumen and furuncles in the external meatus but little more, perforations or other lesions of the drumhead cause more disturbance, and catarrhal inflammations in the mucosa of the tube and tympanum still more, while ankylosis of the ossicles and foot-plates of the stapes produce marked disturbance of hearing. Finally, profound deafness and tinnitus result from hæmorrhage into the labyrinth. In furtherance of his contention, Dr. Ballenger describes briefly some lesions of the auricle, of the external meatus, of the drumhead, the lining mucosa, the tympanic muscles, &c., and their relationship to deafness and tinnitus.—(*The Laryngoscope*, Aug., 1900.)

**Facial Paralysis as a Complication of Acute Otitis Media.** By William R. Murray, M.D., Minneapolis.—Out of 258 cases of acute otitis media which were treated during one year in the Illinois Eye and Ear Infirmary, there were two cases complicated with facial paralysis.

In the first case, the patient, a man, aged 34, received a kick on the left ear, followed by severe pain in the ear, which persisted until rupture of the drumhead occurred. On examination, purulent discharge was found in the meatus, the left tympanic membrane was ruptured, and there was left facial paralysis. The ear was treated with antiseptics, iron and strychnine were given internally, and the faradic current applied over the affected muscles. At the end of six weeks all signs of facial paralysis were gone.

The second patient was a schoolboy, who, three weeks prior to admission to the hospital, had had a severe attack of earache in left ear, accompanied by a left facial paralysis. The tympanic membrane was found to be ruptured,

the meatus contained muco-pus escaping from the middle ear, and there was a partial paralysis of the facial muscles supplied by the left seventh nerve. Under similar treatment the ear healed, and the paralysis entirely disappeared. —(*Archives of Otolaryngology*, No. 1, 1900.)

**Excessive Hæmorrhage following the Removal of a Myxo-Fibroma from the Ear.** By C. R. Dufour, M.D.—The patient, a married woman, 50 years of age, complained of a growth in the ear, accompanied by discharge and great pain. There had been a suppurating otitis media for many years. The external canal was found on examination to be completely filled by a firm polyp which protruded from it, and there was an abscess round the tragus. The removal of the growth was advised. On the following day the wire of a snare was passed around the growth, and as it was found that the polyp could not be cut through, it was removed by torsion. It came away in its entirety, and was followed by a severe arterial hæmorrhage. Hot water was used without effect; compression of the carotid artery in the neck checked it while pressure was continued, to at once return on removal of the pressure. Packing the meatus also failed, until the patient was put under the influence of an anæsthetic and the meatus firmly packed with iodoform gauze. This packing was removed in four days, and no return of bleeding occurred. —(*Archives of Otolaryngology*, No. 1, 1900.)

### *Books, Pamphlets, &c., Received.*

**Selected Essays and Monographs (from foreign sources).** By Various Authors. London: The New Sydenham Society. 1900.

**Diseases of Women: A Treatise on the Principles and Practice of Gynæcology, for Students and Practitioners,** by E. C. Dudley, A.M., M.D. Second Edition, Revised and Enlarged, with 453 Illustrations, of which 47 are in Colours, and 8 Full-page Plates in Colours and Monochrome. London: Henry Kimpton. 1900.

**Orthopædic Surgery,** by Charles Bell Keetley, F.R.C.S. London: Smith, Elder & Co. 1900. (16s.)

**Hernia: Its Etiology, Symptoms, and Treatment,** by W. M'Adam Eccles, M.S. Lond., F.R.C.S. Eng. London: Baillière, Tindall & Cox. 1900. (7s. 6d. net.)

**Electricity in Gynæcology,** by Richard J. Cowen, L.R.C.S.I., L.R.C.P.I. London: Baillière, Tindall & Cox. 1900. (3s. 6d. net.)

**The Permanganate Treatment of Opium and Morphine Poisoning,** by Dr. William Ovid Moor. London: Baillière, Tindall & Cox. 1899. (1s. 6d. net.)

**Essentials of Diagnosis, arranged in the form of Questions and Answers, prepared especially for Students of Medicine,** by Solomon Solis-Cohen, M.D., and Augustus A. Eshner, M.D. Illustrated. Second Edition, Revised and Enlarged. London: Henry Kimpton. 1900.



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDING 22ND SEPTEMBER, 1900.**

	WEEK ENDING				
	Aug. 25.	Sept. 1.	Sept. 8.	Sept. 15.	Sept. 22.
Mean temperature, . . .	58·3°	59·2°	55·9°	57·5°	55·6°
Mean range of temperature between day and night, . .	10·1°	15·1°	12·4°	23·9°	16·5°
Number of days on which rain fell, . . . . .	?	1	3	1	2
Amount of rainfall, . ins.	?	0·33	0·64	0·06	0·12
Deaths registered, . . .	251	250	256	274	276
Death-rates, . . . . .	17·5	17·5	17·9	19·2	19·3
Zymotic death-rates, . . .	3·2	3·8	2·7	3·1	3·7
Pulmonary death-rates, . .	4·7	3·8	4·4	4·3	4·8
<b>DEATHS—</b>					
Under 1 year, . . . . .	60	62	64	63	83
60 years and upwards, . .	39	52	36	53	40
<b>DEATHS FROM—</b>					
Plague, . . . . .	...	...	1	1	1
Small-pox, . . . . .	...	...	...	1	3
Measles, . . . . .	4	3	3	...	2
Scarlet fever, . . . . .	3	3	3	6	3
Diphtheria, . . . . .	3	2	2	...	...
Whooping-cough, . . . .	15	16	11	16	16
Fever, . . . . .	4	3	1	...	2
Diarrhoea, . . . . .	17	27	17	21	26
Croup and laryngitis, . .	1	3	1	1	2
Bronchitis, pneumonia, and pleurisy, . . . . .	45	34	43	39	51
<b>CASES REPORTED—</b>					
Plague, . . . . .	5	7	5	7	3
Small-pox, . . . . .	8	7	6	4	2
Diphtheria and membranous croup, . . . . .	3	8	10	13	7
Erysipelas, . . . . .	12	16	25	15	17
Scarlet fever, . . . . .	75	96	93	92	73
Typhus fever, . . . . .	1	1	...	...	...
Enteric fever, . . . . .	25	24	31	33	42
Continued fever, . . . .	3	...	...	...	...
Puerperal fever, . . . .	2	2	1	1	...
Measles,* . . . . .	67	46	47	27	14

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 27th September, 1900.

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ORIGINAL ARTICLES.

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INTRODUCTION TO THE COURSE OF LECTURES  
ON THE PRACTICE OF MEDICINE.

By T. M'CALL ANDERSON, M.D.,  
Regius Professor of Medicine in the University of Glasgow.

GENTLEMEN,—It is not my intention to give what is usually denominated an inaugural address, but rather a lecture introductory to the course of Practice of Medicine. For I am no stranger to the University of Glasgow. I can never forget the six happy years which I spent within the portals of the old College in the High Street during my student days; and, as you know, I have gone in and out amongst you, as Professor of Clinical Medicine, for upwards of a quarter of a century, a time which I look back upon as amongst the pleasantest in my life; for I came in contact with successive generations of students, eager in the pursuit of knowledge, who at all times extended to me that confidence and consideration which encouraged me in my endeavours to do good work in my day and generation.

Nothing, therefore, would have given me greater pleasure, if the state of my dear friend Sir William Gairdner's health had permitted him to continue to occupy this Chair, which he so greatly adorned, to the end of the chapter, especially as I never had a colleague more kindly, more courteous, or more

considerate. We all admire his great attainments, his wide culture, his eloquence; we all realise the reputation which his great name brought to the medical school of the University, and how earnestly he sought at all times to promote the best interests of the medical profession. But, above all, we appreciate the high tone which invariably characterised his dealings, whether with students, or with colleagues, or with his professional brethren. I am sure, therefore, you will all join with me in the hope that he may long be spared to enjoy that repose which he has so richly earned.

You will understand, then, how great is my sense of responsibility in venturing to follow in his footsteps; and, during this first session, when a new course of lectures has to be prepared at short notice, I must ask your indulgence if I fall short in any way of your expectations.

As most of you must be aware, times have changed, and with them educational methods, since the days of my student life. Then instruction took the shape almost exclusively of systematic lectures, and laboratory work and clinical instruction were little in evidence; while now the latter are more and more in the ascendant, and systematic lectures are upon the down grade. This will be apparent from the fact that, so long ago as 1888, the General Medical Council passed the following recommendation:—"That in order to afford due time for clinical work, it is desirable that the number of systematic lectures be restricted;" and again, in 1890, the following was adopted:—"That the regulations requiring attendance on systematic courses of lectures ought not to require attendance on more than three lectures weekly in any one course." The late University Commission, too, working apparently upon the same lines, enacted that the winter course should be one of five months, the minimum of a hundred lectures formerly prescribed being omitted.

#### PLAN OF THE COURSE.

In entering upon a course of practice of medicine, it is well for you to realise what it is that you have come here to learn. The answer to that question is not far to seek. You have come here to be taught therapeutics. It is quite true that you will hear a great deal with reference to accessory subjects, such as the nature, etiology, and diagnosis of disease; but all this is done to enable you to treat it with success. If it were not for this there would be no such things as hospitals; for who would contribute to the support of an hospital if it were

not for the belief that it is the means of alleviating suffering and of curing disease? Nay, more, the whole of your previous studies have for their aim and object the acquirement of knowledge which will put you in a position the better to grapple with the manifold ailments inseparable from the life of man.

The prevention and cure of disease, then, is the goal to which all departments of medical science tend; for however useful it may be to be able to give a name to a malady, to foretell its issue, or to dispel fears as to the existence of a complaint whose only habitation is in the imagination of the sufferer, our mission would be a comparatively useless one were we not in a position "to cure the curable and comfort the incurable." "The real physician," said Broussais, "is the one who cures: the observation which does not teach the art of healing is not that of a physician, it is that of a naturalist." In the opinion of that great physician, the late Dr. Lathom, students are taught too much science, to the displacement of practical knowledge. "The practice of physic," he said, "is jostled by quacks on the one side and by science on the other," an indictment which is even more true to-day than it was when the words were uttered. And the General Medical Council, alive to the extent of this evil, has endeavoured to counteract it by prescribing a fifth year of medical study to be devoted to clinical work.

It is a good old saying that "prevention is better than cure," and it must be admitted that preventive medicine has made giant strides in recent years. Let me give you an illustration:—

At the end of July, 1875, a servant from Dowanhill was admitted to the Western Infirmary suffering from enteric fever. Next day the late Dr. Fergus informed me of three other cases in Dowanhill, in which he suspected the milk supply as the cause of the mischief. The day following I was called to a case in Westbourne Terrace, and about the same time Dr. Renton told me of one case and Dr. Perry of two in the same district. In all, there were twenty cases. In everyone the milk was supplied from the same dairy in Partick. The sanitary officers took up the matter, and ascertained that at this dairy a patient was recovering from an attack of enteric fever. The milk supply from it was stopped, and no more cases of enteric fever occurred.

At the close of December, 1877, another epidemic of enteric fever, of a more serious character, occurred. At that time I was asked by the late Dr. M'Lean to see with him a gentleman

living in Greenvale Place who was attacked. A few days thereafter I saw, with Dr. Robert Bell, a young lady residing in Lansdowne Crescent, on the following day another young lady residing in Park Circus, and a few days later a gentleman living in Hillsborough Square, all suffering from enteric fever. About the same time two more sufferers—governesses from Hillhead—were admitted into my sideroom in the Western Infirmary, and shortly after a servant from Woodside Crescent, whose mistress was just recovering from enteric. All these households were supplied with milk from the same dairy. These and similar facts having been brought to the knowledge of Dr. Russell, he investigated the matter with his usual thoroughness, and the following is a synopsis of his report as it appeared in the *British Medical Journal*, 19th January, 1878, p. 101:—

“In a picturesque situation, on the banks of the Avon, stands a farm, whose arrangements are such as to favour the contamination of the products of the dairy. In this farm a son sickened with enteric fever on 1st December, 1877, a servant girl on 20th December, and another boy on 27th December. The work of the dairy was carried on by persons who attended the patients. From this farm there were sent daily 25 gallons of milk to Messrs. A & B, of Hillhead, and they passed on 8 gallons to Messrs. C & D. The 17 gallons retained were distributed to families in Hillhead and the West End of Glasgow, partly to wholesale and retail customers. The immediate result was an epidemic of enteric fever, almost entirely among the customers of Messrs. A & B and Messrs. C & D. The manner in which the disease picked out the persons using infected milk is most graphically shown.” The sale of the milk having been stopped, the epidemic at once subsided. Did time permit, many other illustrations of a similar nature might be given.

There is no point on which greater difference of opinion exists than in reference to the doses of medicines. I am in the habit of pointing out that there is no such thing as a uniform dose applicable to all, and, further, that often it is necessary to administer what many would consider huge, even poisonous, doses. And there can be no question that there are many diseases which cannot be removed without pushing medicines, even to the brink of inducing poisonous symptoms. Let me give you a couple of illustrations.

If you open the *British Pharmacopœia* at p. 264 you will find the dose of iodide of potassium stated to be from 5 to 20 grains. But here is a case which came under my care on

15th December last, in which it was given to the extent of 120 grains thrice daily, and with the most brilliant results.

This patient was admitted in a dazed condition, and we could not get any definite history of his case, but a friend stated that, with the exception of inflammation of the right lung some years ago, he had always hitherto enjoyed good health, although addicted to the use of stimulants in excess. He had paralysis of the left side, which set in four days before admission, having been observed when attempting to rise from bed in the morning, and the loss of power in the arm and leg was absolute, so that he could not even move a finger or a toe.

He had contracted gonorrhœa sixteen years ago, but there was no definite history of syphilis; nor were there any unmistakable signs of syphilis, although there were coppery stains on the right shin and slight enlargement of the inguinal and upper arm glands.

He began the use of iodide on 20th December, in doses of 10 grains thrice daily, which were steadily increased until, by 4th January, he was taking 120 grains thrice daily.

The improvement in the paralysis was steady and uninterrupted, and he was dismissed quite well on 31st January, so much so that it was impossible to discover any trace of paralysis.

The use of iodide of potassium in psoriasis in large doses, even up to an ounce daily, was recently brought prominently before the profession by Dr. Haslund, of Vienna. I have used it frequently in these doses, and often with the best results; and the curious thing is that the phenomena of iodism, coryza, acneiform eruptions, &c., are *much* more likely to occur with small than with large doses.

One other illustration will suffice. There is no disease more rebellious to treatment than St. Vitus' dance, and the great number and variety of the remedies mentioned in our text-books is the best proof of their unreliability. There is, however, one class of drugs, based upon the view which I entertain with regard to the nature of the affection, from which I have obtained excellent results in many cases—I refer to the coal-tar derivatives, and especially to antipyrin. On referring to the *British Pharmacopœia* you will find the dose stated to be from 5 to 20 grains for adults. But such doses are of little service in St. Vitus' dance. Let me give you one illustration out of the many which I have had of its value in large doses.

A girl, æt. 12, was readmitted to the Western Infirmary on

17th December, 1892, suffering from a violent attack of chorea of a month's duration. The family history was unimportant, but she herself had an attack of rheumatic fever about twenty-one months before admission, which confined her to bed for five or six weeks. She had not long recovered from this when she had a slight attack of chorea, but which lasted for many months. She was re-admitted on 17th December, 1892, with a severe attack of a month's duration, both sides of the body being equally implicated. On this occasion the movements were so violent that she was quite unable to walk, nor could she sit without being dashed about so as to injure herself. A special nurse was therefore detailed to watch by her bedside. She was treated on this occasion by rapidly increasing doses of antipyrin. On 17th December she began with 4 grains thrice daily, and by the 16th January, 1893, she had reached 45 grains thrice daily. The only uncomfortable results from these large doses were slight headache and occasional vomiting. Improvement was very rapid, so much so that the special nurse was withdrawn in forty-eight hours. By the 7th of January she was so far recovered as to be able to sit by the fire, although slight movements, limited to the right hand and leg, still persisted. She was dismissed quite well on 7th March, 1893.

It will be observed that the doses given were very large, for while the recognised dose for an adult is from 5 to 20 grains, this girl, only 12 years of age, took 45 grains thrice daily without any serious disturbance, and the result was remarkable, especially considering the severity of the case.

But do not infer from what I have said that the efficacy of a drug is always in proportion to the amount which is administered, indeed, it is in some cases almost in the inverse ratio: and never forget that the effects of a medicine are not necessarily similar in different doses, indeed, they are often diametrically opposed. For example, give a child a teaspoonful of ipecacuanha wine every few minutes, and vomiting is soon induced, but give it one drop in a teaspoonful of water every hour, and in certain cases it will arrest vomiting. Or take the most certain diaphoretic with which we are acquainted—pilocarpine administered subcutaneously—if we inject from a quarter of a grain to half a grain it will produce profuse perspiration, but give it in doses of one-twelfth of a grain to a patient suffering from night sweats and it will often put a stop to it altogether; and the same results are obtained with regard to other diaphoretics.

It is of great importance, when possible, to discriminate

between the affection and the disease, so that we may be able to treat it with success. Thus, a man suffers severe pain in one lower extremity, following the course of the sciatic nerve. But this condition—called *sciatica*—may be due to an immense variety of causes, *e.g.*, inflammation of the sheath of the nerve, pressure upon it, gout, rheumatism, &c. We shall suppose, in a given case, that it is rheumatic; then, while the affection is *sciatica*, the disease is rheumatism. And, accordingly, while we attack the affection by means of local measures, we endeavour to subdue the disease by the administration of the salicylates and the other anti-rheumatic remedies.

Let me give you a couple of illustrations of the vital importance in many cases of diagnosing the disease as distinguished from the affection.

On the 2nd of March, 1886, I was requested by a professional friend to see with him, at Pollokshields, a gentleman, *æt.* 29. A few weeks before I saw him he began to complain of numbness of the hands, arms, feet, and thighs, accompanied by defective sense of touch. He had also a difficulty in executing delicate movements with his fingers. He staggered in walking, had difficulty in stepping backwards, could not walk along a narrow plank, and could not stand with his feet together and his eyes shut, so that ataxy was well marked. The knee-jerks were absent, but there was no paralysis.

These symptoms pointed to disease of the posterior columns of the cord—progressive locomotor ataxy.

On enquiry, however, I found that in November of the previous year he had a severe attack of diphtheria, with pronounced throat and constitutional symptoms. In the beginning of January, too, he began to experience some difficulty in swallowing, especially solid food, while fluids had a tendency to regurgitate through the nose unless the nostrils were closed, and his voice assumed a nasal twang. These symptoms gradually increased for some weeks, but had disappeared at the time of my visit.

It was, therefore, concluded that, while the affection was that of the posterior columns of the cord, the disease was the diphtheritic poison. I, therefore, ventured to give a favourable prognosis. The continuous current of electricity—20 cells of a Leclanche's battery—was applied to the spine for a few minutes night and morning, he took a phosphorus pill thrice daily, and got a daily subcutaneous injection of liquor strychniæ—the dose being 4, gradually increased to 10 minims. Under this treatment he rapidly improved, and was soon convalescent.



On the 8th of January, 1894, a timekeeper, æt. 42, was admitted to the Western Infirmary suffering from paralysis of three weeks' duration. No neurotic tendency could be made out in reference to the family or personal history, he had always been a very temperate man, and the only previous illness was stated to be an attack of pleurodynia of short duration four years before admission.

For some weeks before I saw him he had suffered from a severe cold, which he had neglected; but it became so aggravated three weeks before admission that he had to take to bed. Two days thereafter he began to suffer from pain in the legs, and, on the following day, on attempting to get out of bed, he fell at full length upon the floor. When he was put into bed it was found that both lower limbs were absolutely paralysed, and this was accompanied soon afterwards by anæsthesia in the affected parts. His bladder also began to trouble him, as he had difficulty of micturition, sometimes amounting to retention, and pain in the hypogastric region. His bowels, at first costive, soon became loose, and he lost control over the sphincter, passing all his motions in bed. About a week after the onset, too, four bedsores formed over the sacral region. Besides a feeling of numbness there was a sensation of tingling in the feet, and, to a less extent, in the hands. He was treated at home until the "congestion of the lungs" was recovered from, when he was sent into hospital.

When he came under my care, the paralysis of the lower extremities was almost complete, only a very slight degree of motion being present in the toes. Loss of sensation was absolute, and extended nearly up to the umbilicus, while the knee-jerks were completely in abeyance. There was retention of urine requiring the use of the catheter, and he passed all his motions in bed. There were four large, deep bedsores in the sacral region. The pains in the legs were constantly present, always severe, and aggravated at certain times. They were worse in the feet, but were not shooting in character.

He stated that there was no loss of power in the arms, but the dynamometer only registered 10 kilos. in each hand.

I well remember, when I was resident medical officer in the Royal Infirmary many years ago, that such cases were not admitted into hospital at all, as they were supposed to be hopeless.

I concluded that the lesion affecting the spinal cord was of a syphilitic nature, for the following reasons:—

1. Twenty years before, after exposure, he had a "very

trifling" affection of the penis, the precise nature of which he does not remember. He was treated with internal remedies for a fortnight only, and was said to have been "cured"! There were no secondary symptoms.

2. He married in 1881, at the age of 30. The following record gives the issue of his wife's pregnancies:—(a) Six months' child, stillborn, March, 1882; (b) seven months' child, stillborn, with a rash upon the body; (c) eight months' child, said to have been dead two weeks before the confinement; (d) six months' child, stillborn; (e) female child at full time, apparently healthy, but, at the age of 5 years, was in the Royal Infirmary with disease of the ulna and tibia; (f) miscarriage at the third month; (g) boy at full term, apparently healthy at birth, died a fortnight afterwards from "collapse of lungs;" (h) miscarriage at second month, a year before admission of the patient.

3. The pains in the legs were markedly nocturnal, and he had occasionally slight headache, which was also worst at night.

The affection in this case was of the spinal cord, while I trusted that the disease was syphilis, because then there was some hope of improvement.

He was put upon a water-bed, the bladder and bowel troubles and the bedsores were treated in the usual way, antipyrin was given every night for the relief of the pains in the legs, and the disease was treated by means of mercurial inunction, which was commenced on the 9th of January, the day after admission.

A fortnight thereafter he could draw up his legs in bed, and the improvement rapidly increased. At the same time, the anæsthesia became less marked, and, finally, completely disappeared. By the 28th, the retention of urine was gone, and he regained control over the sphincter ani, while the bedsores rapidly healed, and the pains in the legs disappeared, so that the antipyrin was stopped. On 10th February he was able to rise and walk about the ward. The improvement in walking increased daily, and, though his legs were tremulous at first, they were perfectly steady when he was examined on 23rd February, the anæsthesia being also completely gone. The grasp of the hands was much more powerful, the dynamometer registering 36 kilos. with the right, and 30 kilos. with the left hand (as compared with 10 kilos. on admission). He left the infirmary on 13th March, at which time his recovery was perfect. He could walk as well as ever he did, and even the knee-jerks had returned.

These cases, then, illustrate very forcibly the practical importance of making a correct diagnosis of the disease as distinguished from the affection.

It has been frequently asserted that the advances which have been made in surgery in recent years are far in excess of those which have taken place in medicine. I do not care to enquire whether this is the case or not, but this I can say, without fear of contradiction, that, in the latter, they have been of a very remarkable character. I shall content myself with one or two illustrations.

The disease to which the term myxœdema is now given has only recently been proved to be a distinct pathological entity, thanks to the investigations of Gull and of Ord, and I am inclined to the opinion that, before their time, most of these cases were supposed to be illustrations of Bright's disease, without albuminuria. At anyrate, it is now certain that the symptoms are dependent upon cessation of the functional activity of the thyroid gland, which is in a state of atrophy, and the inference which was drawn from that circumstance was, that the appropriate treatment should be to supply the system with the secretion obtained from the thyroid glands of animals. This treatment was first carried out by Victor Horsley, and by Murray, of Newcastle, and the results have far exceeded the most sanguine expectations. In a few days, a distinct improvement in the condition of the patient has been noted, and within a few weeks he is generally restored to health. It is true that, if the administration of thyroid extract is suspended, the mental and bodily hebetude, and the other symptoms of myxœdema, gradually return, but a continuance of the medicine, in small and less frequent doses, renders the improvement permanent.

The study of micro-organisms in relation to disease, which has so deeply interested the profession of late, has led to numerous discoveries in reference to the etiology, diagnosis, but, above all, to the treatment of disease. Let me give you a couple of illustrations.

It has long been known that diphtheria is a very contagious disease, but the source of the contagion was unknown until 1875, when Klebs discovered that it was due to a micro-organism, found, for the most part, in the diphtheritic exudation, and now known as the "Klebs-Löffler bacillus." A poison is generated by the growth of the bacillus, which, being absorbed, produces the toxic phenomena characteristic of the disease. This bacillus is very tenacious of life at ordinary temperatures, hence the great importance of thorough

disinfection, and the explanation of the recrudescence of cases of diphtheria in households where it has been, perhaps, months before.

This discovery of the essential cause of diphtheria led to the suggestion that the blood-serum of animals, rendered artificially immune to diphtheria, if injected into the subcutaneous cellular tissue of a patient suffering from the disease, might arrest the further progress of the complaint. This method of treatment has been employed over a very wide area, and on an extensive scale, and the results have proved so satisfactory that it must now be regarded as little short of criminal folly to deny the patient the benefit of its administration. For the results are often wonderful, the patient entering the harbour of convalescence from twenty-four to forty-eight hours after its employment, but, to be effective, it must be given early, and as soon as the diagnosis is made.

In former days, malarial fever was very rife in this country. "Two hundred years ago," wrote Murchison, "agues and other malarial fevers were amongst the most common diseases in this country. James I and Oliver Cromwell both died of ague in London. . . . The country surrounding London was, in Cromwell's time, as marshy as the fens of Lincolnshire now are, so that Cromwell was named 'The King of the Marshes.'" But, at the present day, owing to the almost universal drainage and cultivation of the soil, agues have, save in a few isolated districts, almost vanished from this country.

In Scotland we rarely encounter it save in those who have brought home the poison imbibed in foreign climes. But, in tropical and subtropical countries, in low-lying, warm, and moist localities, it is terribly common, and very fatal.

In the year 1880, Laveran, a French army surgeon in Algeria, discovered that this disease was dependent upon the ravages of a parasite belonging to the order of protozoa, and now known as the "*plasmodium malariae*." It is found in the blood—generally within the blood corpuscles—and mainly during the paroxysms of ague which coincide with the period of sporulation of the bacillus.

More recently it has been demonstrated that it enters the system through the medium of a mosquito belonging to the genus *anopheles*. This mosquito attacks a patient suffering from malarial fever, imbibes with the blood of its victim some of the parasites, then inoculates healthy persons with the fluid from the venom gland impregnated with the *materies morbi*, and induces malarial fever.

In corroboration of this view the observations made this year under the auspices of the Colonial Office may be mentioned. Drs. Sambon and Law, with their attendants, volunteered to live in mosquito-proof tents from June till October, *i.e.*, during the height of the malarial season, in a part of the Campagna where no one can spend a night unprotected without succumbing to the disease. Not one of them suffered.

As a complement to this observation it may be mentioned that in the month of July of this year Dr. Manson's son allowed himself to be bitten by mosquitoes which had been fed in Rome on the blood of a sufferer from malaria, under the direction of Professor Bastianelli, and which were sent to London for the purpose. He had never been in a malarial district, but he contracted the disease in an unmistakeable form, and the parasites were found in numbers in his blood (*British Medical Journal*, 21st September, 1900, p. 847).

For the prevention of the disease, therefore, we must impress upon all persons inhabiting malarious districts the necessity of sleeping in mosquito-proof tents; and we must make war to the knife with this variety of mosquito, which can be effected owing to our knowledge of its habits. It deposits its eggs in water only—not in large sheets of water, but in little stagnant pools in low-lying ground, and in ditches. If a little olive oil and turpentine is put into these pools it forms a film on the surface of the water which kills the larvæ by depriving them of air. Of course, thorough drainage has a similar result, so that either way the ravages of ague may be arrested. With this knowledge at our disposal it is only a question of time when we shall circumvent the enemy, and mitigate the ravages of that terrible scourge, malarial fever.

The treatment of disease is not like the working out of a mathematical problem; there is no certainty about it, for we are not all built in the same mould; and we must lay our account with idiosyncrasies, *i.e.*, a peculiar temper or disposition of body not common to another, thus verifying the truth of the saying that "what's one man's meat is another man's poison." Neligan had a patient who would fall down in a fit if anyone persevered in cracking his nails in his presence; at the first sound his face became congested and livid, and, if the operator was cruel enough to persevere with the experiment, he went off almost as if in epilepsy, although at all other times free from any such tendency.

There is no disease which provides more numerous and

striking illustrations of idiosyncrasies than nettlerash. Let me give you one instance of this in the case of a relative of my own, who was a well-known parliamentary solicitor in London, now deceased. I quote from a letter of his. "My experience of nettlerash is anything but recent, as it is now nearly thirty years since I discovered that I could not eat butcher's meat in any form without causing it, upon which I finally gave up the indulgence of that taste. Since then I have once or twice had slight attacks of nettlerash from partaking of very strong soup, but none of those violent symptoms which the solid meat used to occasion. I first made the discovery after a long fever I had in 1830-31. I had previously suffered occasionally from nettlerash, but not violently, nor uniformly, on eating meat. After my fever, however, it was a clear case. It was not long before I found that everything in the shape of butcher's meat was inadmissible. Many trials were made with meats, and portions apparently as tender as, or more so than, fowl—as, for instance, rabbits, ox or sheep's tongue, sweetbreads, &c.—but all with the same inflexible result, and that whether or not I knew what I was eating, or expected to suffer from it, which satisfied me, and the most incredulous around me, that imagination had nothing to do with it. The symptoms did not begin for an hour or two. The first was the feeling of a lump over my stomach, perceptible even to the touch; then appeared nettlerash on my wrists, my arms, my groins, and other tender parts of the skin; at first in separate white blisters (as if an army of fleas and bugs had attacked me), which shortly agglomerated into large masses of white blisters. Along with this the inside of my throat and nose became swelled, and my voice hoarse, and a feeling as if I had a violent stuffy cold in my head ensued. If the attack were less severe, I used to go to bed, and was well by morning. If more violent, I used to take magnesia, which acted strongly on my bowels, causing, first, faintishness and then severe purging, after which I became well. . . . If you will make it worth my while, I will come down at the Whitsuntide holidays and be exhibited. I will also eat the *ornithorhynchus paradoxus*, if you can catch one unstuffed, and finally determine whether it be beast or bird."

This question of idiosyncrasy must never be lost sight of, not only as regards food, but also in reference to drugs. Thus, some people are most injuriously affected even by small doses of mercury, and the smallest dose of *assafoetida* has been known to have the invariable result of producing syncope,

whilst iodide of potassium occasionally gives rise to a widespread fungating eruption.

In a case which I saw recently in consultation, the patient was at death's door, and was only rescued by a recognition of the cause, and its removal.

Finally, we must never forget that while some medicines, such as strychnia, are cumulative, and may lead to a sudden explosion of poisonous symptoms, a tolerance is established in the case of others which is truly remarkable. Thus, the late Dr. Neligan repeatedly saw a lady patient drink a wineglassful of laudanum with no more effect than if it had been a glass of sherry.

A patient of Trousseau's, a brush manufacturer, consulted him on account of excessive nocturnal pain in his bones. "He had come to take about 6 to 8 oz. of Rousseau's laudanum, a preparation which contains three times as much extract of opium as the laudanum of Sydenham. He drank it in tumblers in my presence; and added that, on his trying the sulphur cure at Enghien, his pain had been so intensified that he determined on poisoning himself, and took, in one dose, 24 oz. of Rousseau's laudanum. . . . He slept for three hours only."

The time at our disposal will not permit of my dwelling longer on this most interesting theme, a circumstance which is the less to be regretted seeing that we shall encounter it at every turn in the course upon which we are now entering.

During all the years of my incumbency of the Chair of Clinical Medicine I am glad to acknowledge that the relations which have subsisted between successive generations of students and myself have at all times been of the most cordial description; indeed, I cannot recall a single instance in which it has been necessary for me seriously to complain of the conduct of a student. Am I too sanguine in giving expression to the hope that the same pleasant relations which have existed in the past may continue in the future, and that, at the close of this session, we may all be able to look back upon work, conscientiously undertaken, and successfully accomplished.

OCULAR HEADACHE.<sup>1</sup>

By JAMES HINSHELWOOD, M.A., M.D., F.F.P.S.G.,  
Surgeon to the Glasgow Eye Infirmary.

THAT eye-strain is a cause of headache is a fact which is generally known, but I am quite certain that its importance as a frequent cause of this distressing symptom is not sufficiently appreciated.

Stevens<sup>2</sup> reports that in 100 consecutive cases of chronic headache in which the eyes were examined, he cured 61 by correcting the ocular defects. Gould<sup>3</sup> says that out of 1,500 cases in private practice he found 75 per cent of all headaches, and 95 per cent of sick headaches, were due to eye-strain. Whilst not attaching too great importance to statistics constructed on such a narrow basis, they at least serve to illustrate, in a graphic way, the great frequency of eye-strain as a cause of chronic headache. I am quite certain we are keeping well within the limits of safety, when we say that of the cases of chronic headache met with in ordinary practice, at least 50 per cent are due to eye-strain.

It is therefore a matter of considerable importance for the general practitioner to be able to detect the ocular origin of a headache, both for his patient's comfort and for his own reputation. Many of these cases are not recognised because the connection between the headache and the eyes is not always manifest, and is often entirely unsuspected by the patient. Hence, it will be of value to the practitioner to know what clinical experience teaches regarding the characteristics of these ocular headaches. Such knowledge may help to prevent him from falling into the serious error of submitting his patient in vain to a long course of medical treatment, instead of giving him the immediate and permanent relief which follows in such cases from the prescription of suitable glasses.

But here I would give a word of warning, Never send such patients direct to the optician. Send them either to the hospital or the surgeon's private consulting room, where the refraction can be accurately measured. How often have I seen patients coming into my consulting room with an

<sup>1</sup> Read at a meeting of the Glasgow Medico-Chirurgical Society held on 5th October, 1900.

<sup>2</sup> *Functional Nerve Diseases*, 1887, p. 48.

<sup>3</sup> *Ophthalmic Review*, vol. x, p. 280.



extensive collection of spectacles, which they had gradually amassed in their visits to the various opticians, and all to no purpose. The accurate measurement of refractive errors, and the prescription of suitable glasses, is a task often demanding great knowledge and judgment, which can only be satisfactorily accomplished by the ophthalmic surgeon.

Headaches due to eye-strain vary much in position, in character, and intensity. Sometimes it is only a slight dull pain, or a feeling of weight and heaviness, but sometimes it amounts to pain of a very intense character. In some cases the pain in the head is so persistent and severe as to cause grave apprehension of some intracranial disease, but usually the ocular headache is described by patients as a dull, heavy ache. The position of the pain also varies greatly. Some describe it as superficial, others as deep-seated. It may be frontal, temporal, vertical, or occipital, and I have even seen cases of pain at the back of the neck due to eye-strain. The most common seat of ocular headache is undoubtedly the frontal region just above the orbits, but it is met with in all situations. Hemicrania due to eye-strain is not common, but I have met with several cases of it.

In many cases of ocular headache, the patients complain of discomforts in or about the eye, such as a sense of heaviness or burning in the lids, a feeling of soreness in the globe of the eye, or a deep-seated pain at the back of the orbit. When such symptoms are present, the discomforts in or about the eye draw attention to the probable origin of the headache, and thus help greatly in the diagnosis. But it should not be forgotten that there are cases of headache of undoubted ocular origin where there are no discomforts whatever in the eye. These are the cases in which the true cause of the headache is frequently not discovered until after many years of suffering on the part of the patient. Hence, it is important to bear in mind the fact that the complete absence of subjective eye-symptoms does not at all exclude the possibility of an ocular origin of the headache.

But even in such cases there is one characteristic in the history of the headaches, which should arouse a suspicion in the physician's mind that the headaches may be due to eye-strain. I refer to the fact that, in ocular headaches, the pain is nearly always brought on, or, if persistent, is intensified by the use of the eyes. This is a point of great importance, and should always be enquired into very carefully. If a patient, suffering from chronic headache tell us that on the Sunday, when being away from business, he has little reading or

writing to do, his headache is always much better, or perhaps entirely disappears, then suspect that it probably is of ocular origin. If a lady inform us that whenever she goes out shopping, looking in at the windows and examining different articles in the shops, she always returns home with a racking headache, then suspect that this headache also is of ocular origin. Whenever you find that the headache is brought on or intensified by the use of the eyes, or relieved or ameliorated by resting them, then always strongly suspect eye-strain is the probable cause.

But although headache due to errors of refraction depends directly upon the extent to which the eyes are used, in some cases the headache assumes a curious paroxysmal character. The patient may use his eyes continuously for near work, and yet suffer from one or two attacks only during the week. Such headaches may be extremely severe, sometimes accompanied by vomiting, and may even interrupt the patient's work. They resemble an attack of megrim, but they differ from true megrim in their bilateral distribution, and in the absence of any of the higher visual phenomena, such as fortification figures, or defects in the visual fields.

When our suspicions are aroused as to the ocular character of the headaches, we should at once proceed to examine the patient's acuteness of vision with the test-types. Here I would remark the utter uselessness of asking the patient if there is anything wrong with the sight. I have had patients frequently assure me that they had excellent vision, and when they were examined with the test-types it was found that their vision was very defective. A large number of patients suffering from astigmatism, for example, are not aware that their acuteness of vision is below normal, because, their affection being congenital, they possess the same acuteness of vision which they always had, and have no standard of comparison to test it by, until they are brought to the test-types. It is difficult sometimes to convince such patients that their vision is not so good as they imagine it to be. I have met with many striking examples of this class.

A few years ago a friend of my own, on a holiday visit to me, remarked that it was curious that the headaches from which for many years he had suffered more or less at business always left him when on a holiday. He had never derived any relief from the numerous remedies which had been prescribed for him by the many physicians whom he had seen in the course of years. This history, voluntarily given, made me suspect that his headaches might be of ocular origin, but

on suggesting this he scouted the idea. He never had any pains in his eyes, and he assured me his vision had always been good. However, on taking him to the test-types, I found that his acuteness of vision was considerably below normal, and on examining him by retinoscopy, astigmatism was found in each eye with the meridians oblique. Cylindrical glasses were prescribed for constant wear, and he had no further trouble with the headaches from which he had suffered constantly for so many years.

A point of great importance is that headaches of ocular origin are frequently due to very slight errors of refraction, which are only discovered on very careful examination of the patient. High errors of refraction are but rarely associated with headaches, which are found chiefly associated with medium and especially with very slight refractive errors. Hence, I always urge that all suspected cases, even with a normal acuteness of vision as tested by the distance types, should be examined under homatropine with the shadow test, or by some of the objective methods. With such objective methods as the shadow test and the ophthalmometer, it is now possible to estimate refractive errors with the greatest precision and nicety.

It is sometimes astonishing to find the distressing headache and the great discomfort which may be due to such a slight refractive error as half a dioptré of astigmatism. I think the probable explanation is that, with a very high degree of refractive error, the patient's vision is so defective that he abandons all effort to improve it, and hence no strain is thrown upon the ciliary muscle. But with the slight errors, sufficient to produce slight indistinctness and blurring, such, for example, as is produced by a small amount of astigmatism, the patient is constantly endeavouring by irregular contraction of his ciliary muscle to counteract the astigmatism and get clear images. The constant strain on his accommodation thus produces the distressing symptoms from which he suffers.

At the beginning of this year I saw a lady, æt. 33, who for years had suffered from severe frontal headaches, which had been much worse since an attack of influenza a year ago. These frontal headaches were always intensified by the use of the eyes. For some months before I saw her she had given up reading, as she found that the attempt to read for any length of time always brought on a severe attack of headache. She complained especially of the severe headache which always followed her shopping excursions, and said she was always afraid to look into a shop window for fear of bringing

on her distressing headaches. On examination under homatropine I found that she had half a dioptré of hypermetropic astigmatism in the right eye, and the same amount of myopic astigmatism in the left. These cylinders were prescribed for constant wear, and since then she has been entirely free from headaches, and able to use her eyes without discomfort. This is only one of the numerous examples which I could quote from my case-books where a very slight amount of astigmatism frequently produces the most distressing symptoms, of which headache is one of the most common.

Whilst we know that headache is a very frequent accompaniment of errors of refraction, we must remember that it is a symptom only of a minority of such cases, although a very considerable minority. Bickerton,<sup>1</sup> of Liverpool, says that out of 1,000 cases of errors of refraction he found 277 suffering from headaches. This gives a percentage of 27·7. Ernest Clarke<sup>2</sup> finds that, of his patients who suffered from some error of refraction, about 30 per cent complained of headache. From my own private case-books I find that, taking my last 500 cases of errors of refraction, 123 of these suffered from headaches—that is, about 25 per cent. We may therefore take it as a fairly correct statement that, of patients suffering from refractive errors, from 25 to 30 per cent suffer also from headache.

Of all the forms of refractive error, the one which is most frequently the cause of headache is astigmatism. Of the 123 cases of refractive error in my practice associated with headache, 90 were cases of astigmatism, 28 were cases of hypermetropia, and 5 cases of myopia.

This illustrates fairly well the relative importance of the various forms of refractive error in the production of headache, and it will be thus seen that astigmatism is by far the most common cause.

Of the different forms of astigmatism, the hypermetropic form is the one most frequently associated with headache. Of my 90 cases of astigmatism with headache, 40 were cases of hypermetropic, 31 were cases of myopic, and 19 were cases of mixed astigmatism.

I have already called attention to the fact that the presence of a very small amount of astigmatism, 0·5 to 1 D, is very frequently the source of all the patient's discomforts. Hence it is a matter of the very greatest importance to estimate this error with the greatest possible precision.

<sup>1</sup> *Lancet*, 1887, vol. ii, p. 303.

<sup>2</sup> Ernest Clarke, *Eye-Strain*, London, 1892.

I would here call attention to the great utility of the ingenious instrument invented by Dr. Thos. Reid—the portable ophthalmometer, for the detection and measurement of corneal astigmatism. In the *Ophthalmic Review* of 1897 I have summarised in a short paper the special advantages of this beautiful instrument, which I have used for many years both in hospital work and in private practice. With this little instrument such a high degree of precision is attainable that a corneal astigmatism of 0.25 to 0.5 D can be readily estimated in a few seconds. It is a great help in a suspected case to be able to detect by this rapid and precise method the presence or absence of corneal astigmatism. When I detect the presence of corneal astigmatism with the ophthalmometer, then I proceed to examine the patient under homatropine, and estimate by the shadow test the total amount of astigmatism, which does not always coincide with the corneal measurement, there being also the lenticular astigmatism, which may increase or diminish the corneal. Where the patient objects to the use of homatropine, because of the prolonged interference with near vision, the shadow test can be employed by dilating the pupil with a few drops of a 5 per cent solution of euphthalmin, which interferes only very slightly, and for a very short time, with the patient's near vision. An account of this new mydriatic will be found in papers of mine in the *British Medical Journal*, 23rd September, 1899, and the *Ophthalmic Review*, November, 1899.

These errors of refraction cause an excessive strain to be thrown on to the ciliary muscle, which evidences itself by the consequent discomfort in the eye, or headache, or both. But another cause of headache is found in weakness or insufficiency of the external muscles of the eye—muscular asthenopia, as it is called. The form most frequently met with is insufficiency of the internal recti. In order to read or do near work, the eyes require to be kept in a state of convergence by contraction of the internal recti muscles. If these muscles are healthy this convergence can be maintained continuously for a long time without discomfort to the patient, but should there be any weakness of those muscles, the prolonged strain produces great discomfort in the shape of headache, or pains in the eyes, or both.

Muscular asthenopia is a very much less frequent cause of headache than ciliary asthenopia; still, it should always be borne in mind, especially when the correction of any refractive error does not give relief to the patient.

Another cause of ocular headache which must be mentioned

is glaucoma. Here the pain is primarily situated over the temporal and maxillary regions, but may spread forwards up to the middle line, or backwards and upwards to include the vertex. The pain is sometimes very severe, and is frequently accompanied by vomiting and considerable prostration. In acute glaucoma the pain in the eye itself is so acute that attention is at once directed to the eye as the cause of the headache, but in chronic glaucoma the headache may be such a prominent feature, and the discomfort in the eye so slight, that its dependence upon disease of the eye may remain unrecognised. This error of diagnosis will lead to disastrous results, as such glaucomatous attacks, without suitable treatment, soon lead to irremediable loss of vision.

The treatment of the cases of headache dependent upon refractive error, and consequent over-strain of the ciliary muscle, consists in relieving this strain by prescribing suitable glasses for the patient.

This of itself is sufficient in the large majority of such cases to give the patient complete relief. There are cases, however, in which medical treatment is necessary, in addition to the relief of the eye-strain, in order to bring about the desired result. In such cases the eye-strain is a factor in the production of the headache, but not the sole factor. I have seen, for example, many cases of persistent headache in young anæmic women, which, though greatly relieved by the correction of the refractive error, did not disappear until the patient had been subjected to a thorough course of iron. I have seen also many cases of patients with refractive error after recovery from some acute disease suffering greatly from headache. The correction of the refractive error did not give relief until the general health of the patient was improved. Cases also occur of periodic headache, in which refraction is an important factor, and complete relief will not be given to the patient until this is corrected. For example, it is a common thing to find women with refractive error suffering from headache during, or at the end of, the menstrual period, which disappears when the eye-strain is relieved by the proper glasses. In these cases, although the element of eye-strain is always present, it takes an additional factor to produce the headache, *i.e.*, lowering of the general health of the individual. I have seen many cases of young girls suffering from headache about the period of the establishment of the menstrual flow which were due to eye-strain, as the headache completely disappeared on correction of the error of refraction. Sometimes the refractive error was very slight, and yet the

correction of it gave complete relief to the patient. After wearing the glasses for a year or two, when the menstrual flow had been regularly established, and their general health was good, many of these patients were able to discard the glasses prescribed, without suffering from any of the distressing symptoms of eye-strain which had previously afflicted them.

This is a clinical fact of considerable importance, which, I think, is not sufficiently appreciated, viz., that the headache is frequently the result of several contributing factors, of which the refractive error is only one. The successful treatment of such cases, therefore, consists not only in the correct estimation of the refractive error and the prescription of suitable glasses, but in the discovery and removal of the other contributing causes.

A very common and very important factor is, as has already been pointed out, some lowering of the general health of the individual. The ciliary muscle, like all the muscles of the body, is influenced by the general condition of the individual. A man in robust health may be able to walk 20 miles, and without any undue fatigue, but the same individual, after an attack of some debilitating illness, may have great difficulty in covering a single mile. So is it with the little muscle of accommodation. A patient with some slight refractive error may have had no discomforts of any kind for many years of his life, because his ciliary muscle was quite able to do the extra work necessitated by the refractive error. He has some illness of a weakening character, or the tone of his general health is lowered, and the ciliary muscle is no longer able to bear the strain which it previously did. Consequently, he begins to suffer more from the symptoms of eye-strain, of which headache is one of the most common. In the treatment of such cases, therefore, attention must be paid to the improvement of the general health of the patient, as well as the prescription of suitable glasses.

Another very important factor in the production of eye-strain is over-work and over-exertion of the ciliary muscle. A patient has got on quite comfortably for a long time, when some alteration in his mode of life takes place which necessitates an increased amount of near work for his eyes. The increased strain is more than the ciliary muscle can bear without manifesting symptoms of distress in the form of pain in the eyes and headache. In such cases it is to be remembered that the treatment does not end simply with the prescription of suitable glasses. Even with normal refraction the eye will stand only a certain amount of work. When this is overdone,

symptoms of discomfort will arise. Such patients must be informed that the eye must not be subjected to too great a continuous strain. I have found it an admirable plan to recommend to the patients who have a large amount of near work to do the advisability of giving the eye occasionally short intervals of rest from near work by stopping their reading or writing or sewing for a few minutes every hour. These short intervals of rest are often of great assistance. It must be impressed upon such patients that glasses are only a help, but that if they wish to get entirely rid of their distressing symptoms, they must arrange their mode of life so that their eyes are not called upon to make the excessive continuous effort demanded by too long periods of near work.

When the headache is due to weakness or insufficiency of the external muscles of the eye, of which the most common form is insufficiency of the internal recti, relief is sometimes given by correcting any error of refraction, and thus enabling the patient to hold his work farther back. Sometimes patients have got into the bad habit of bringing their work quite unnecessarily close to their eyes, thus throwing great strain upon their internal recti. They must be taught the necessity of holding their work as far away from the eyes as they can with comfort. In such cases, too, much good may be done by regulated exercises and by improving the general health of the patient, by enjoining out-door exercise, and by the administration of tonics. In many cases, however, relief can only be given to the patient by prescribing prisms of suitable strength with their bases in, in the case of convergence insufficiency, or in such a position as diminishes the work of the weakened muscle.

It is thus evident, from a study of the foregoing facts, what an important part the eye plays in the production of headaches. It is further evident that, whilst in many cases the relationship between the headaches and the eye is manifest, in others the eye-symptoms are so slight and trifling that the patient may suffer from headaches for many years without their ocular origin being suspected either by himself or his medical advisers. I would therefore insist that in every case of obstinate headache which does not yield to medical treatment, the eye ought to be examined as a matter of routine, even in the complete absence of subjective ocular symptoms. If this line of action be followed, it will frequently meet with its reward in the discovery of the true cause of the headache, and the ability, by suitable treatment, to give complete and permanent relief to the patient.



TENDON-LENGTHENING IN A CASE OF VOLKMANN'S  
ISCHÆMIC PARALYSIS.<sup>1</sup>

By GEO. HENRY EDINGTON, M.D., M.R.C.S., F.F.P.S.G.,

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Royal Hospital for Sick Children, Glasgow; and Visiting Surgeon  
to the Glasgow Training Home for Nurses.

THIS patient was shown to the Society in February of this year (1900) by Dr. Ritchie Thomson.<sup>2</sup> She had had a dislocation backwards of the fore-arm bones at the elbow in December, 1899, and the condition had been treated, first of all, with the limb in a position of extension, but this had gradually been altered to one of flexion at a right angle. A splint of poroplastic had been used, but had been left off at the end of three weeks. Early in the course of the treatment the fingers became flexed, and Dr. Thomson had been subsequently unable to straighten them. Swelling in the substance of the flexor muscles had been noted.

When shown to the Society at the meeting referred to, the thumb and fingers were found to be firmly flexed in the palm, but could be extended to a certain degree by flexing the wrist. The hand was livid, and much colder than its fellow.

There was not, so far as anæsthesia was concerned, any apparent implication of nerve trunks.

Dr. Thomson considered the case one of ischæmic paralysis, and recommended tendon-lengthening. The case came under my care at the Dispensary of the Royal Hospital for Sick Children during Dr. Thomson's absence in South Africa, and the operation of tendon-lengthening was performed on 22nd February, 1900.

*Operation.*—A rectangular flap of about 2 inches in length, and with its base across the front of the wrist, was turned down from the fore-arm. The individual flexor tendons were identified, and were, by means of a fine tenotomy knife, "split longitudinally, and severed to right and left at the opposite ends of each incision"<sup>3</sup> (see figure, p. 345). The cut ends of each tendon were loosely joined by sutures, to prevent any chance of subsequent confusion. The fingers were then extended, and the sutures tied. The longitudinal splits in the

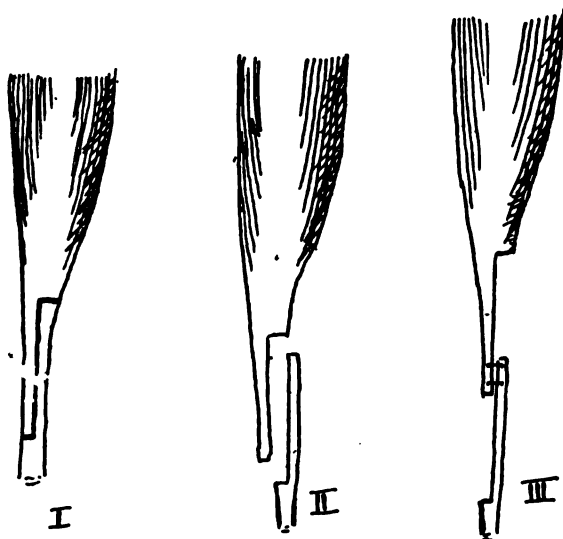
<sup>1</sup> Read at a meeting of the Glasgow Medico-Chirurgical Society held on 5th October, 1900.

<sup>2</sup> See *Glasgow Medical Journal*, September, 1900, p. 190.

<sup>3</sup> Quotation from Mr. Page's paper, *vide infra*.

tendons were over an inch in length, and while in some cases this allowed the cut ends to overlap with the fingers in the extended position, in others the whole of the gain in length was required, and the extremities of the tendons were sutured end to end.

The tendons so treated were those of the flexor sublimis, flexor profundus, and flexor longus pollicis. The median nerve was divided in mistake for this last, but the error was rectified by immediate suture. The sutures used were of fine catgut. The skin flap was then fixed in position by silkworm-gut stitches, dressings were applied, and the limb



Anderson's method of tendon-lengthening (after Littlewood).

was put up on an anterior splint of junk, with the thumb and fingers in the position of full extension.<sup>1</sup>

The operation was done bloodlessly, and the band was not removed till after the application of the dressing.

*Subsequent course.*—There was observed very marked lividity and coldness of the terminal portion of the middle finger. The upper end of the flap sloughed, and this part of the wound healed by granulation, when it was found that the transverse cicatrix was so firmly adherent to the subjacent

<sup>1</sup> The flexion of the fingers was so rigid that it was only possible to cleanse them after the division of the tendons had been completed.

flexors as to greatly impede their action: and while the fingers had now been placed in the extended position, the power of flexion was present in only a slight degree. To remedy this the adhesions were divided subcutaneously on the 23rd April, and the parents were directed to see that the limb was exercised. The result was that the power of flexion was restored, although not to its full extent (as compared with the condition in the uninjured limb), and the lividity of the middle finger disappeared.

About one month after the first operation electrical stimulation had been begun. At first the faradic current gave no reaction, and for a week galvanism was employed; but at the end of this time the interrupted current was begun, and the slight reaction then obtained had gone on increasing. The electrical treatment was left off till the puncture of the second operation had closed, when it was resumed, and was carried on till the beginning of August, when it was finally stopped.

*Present condition* (5th October, 1900).—The power of flexion is good in all the digits, but it is not complete so far as the flexor sublimis is concerned. Pronation is good, as are also the other movements of the wrist and elbow-joint. The circumferential measurement of the fleshy part of the fore-arm is less than that of the other limb (right, 13·5 cm.; left, 14·25 cm.), but on her closing the fist the increase in circumference is equal in both limbs, viz., 0·5 cm.

The hand appears to have undergone no atrophy, and sensation in the parts is apparently normal.

My colleague, Dr. W. K. Hunter, has kindly made an *electrical examination*<sup>1</sup> of the muscles, which shows that the response in the right flexor profundus and sublimis to both currents is diminished, as compared with the extensors, and as compared with the flexors and extensors of the left arm. The response in the flexor carpi ulnaris is quite normal.

Mr. Herbert W. Page reports a case<sup>2</sup> which presents some points of similarity to the above. The following are the main features of his observation:—

A boy, aged 4½ years, was said to have sustained a transverse fracture of the lower end of the humerus in August, 1898. The limb was put up in the flexed position, with anterior and posterior splints on the fore-arm. A few days later there was total loss of power of the fingers and wrist. Immediately below the fold of the elbow was a superficial

<sup>1</sup> 4th October, 1900.

<sup>2</sup> *Lancet*, 13th January, 1900, p. 83.

slough from pressure of the splint. At the end of four weeks the parents were instructed to manipulate and rub the arm on account of an increasing tendency to contraction of the finger and wrist. On one occasion, under an anæsthetic, a fruitless attempt to straighten the fingers and hand was made. When Mr. Page saw the case, three months after the accident, the arm was in a flexed position, midway between pronation and supination. The site and surroundings of the scar of the pressure-sore were exquisitely tender, and there was, in addition, tenderness of the whole anterior surface of the forearm. The fingers were flexed into the palm, and the wrist also was in a position of extreme flexion. The joints were clearly unaffected. Anæsthesia was noted in the ulnar distribution in the hand, and there was some suspicion of atrophy of the first dorsal interosseous muscle. The flexor muscles were very unyielding to pressure. There was no median, ulnar, or musculo-spinal paralysis, and the slight ulnar paresis he attributed to local injury to the nerve at the site of fracture, and possibly to the pressure of callus, which could be felt at the lower end of the humerus. He believed that there had been a separation of the lower epiphysis. Anæsthesia had no effect on the flexor contraction.

In December, 1898, tendon-lengthening was performed. A rectangular flap was raised immediately above the wrist, and the tendons were split and cut through as I have already quoted. They were sutured only after extension had been made. The exposure of the muscles gave the impression of their being "stiff and unyielding, firmer than natural, and as if their structure had been changed." The hand and arm were secured in the flexed position, and the wound healed by first intention. After a fortnight, passive extension of arm and finger was cautiously begun, and massage and electricity were also employed.

He left hospital in February, 1899, with little improvement in the power of the limb, and attended as an out-patient for electrical treatment. By the end of July there was distinct improvement, tenderness of the limb was much less, and extension of wrist and arm was accompanied by much less of the associated flexion of the fingers noted in February. At the beginning of October all tenderness had gone, and he could easily "make a fist." The flexor profundus alone acted on the index. The sense of abnormal resistance was no longer detected on palpating the muscles.

A week or two later there appeared in the *Lancet*<sup>1</sup> the

<sup>1</sup> 3rd February, 1900, p. 291.

report of a lecture "On Some Complications following on Injuries above the Elbow-joint," delivered in Leeds on 14th November, 1899, by Mr. H. Littlewood. His lecture was founded on two cases in which contraction of fingers and wrist followed fracture of lower end of humerus. The following is a *précis* of his cases:—

CASE I.—Girl, aged 8 years, sustained fracture of lower end of humerus, with much swelling of parts. Originally treated on internal rectangular splint for four weeks. At end of this time noted contraction of fingers, which gradually increased. When seen in November, 1898, four months after the accident, there was some limitation of movement at elbow-joint. Fingers could be completely extended when wrist was flexed, but when latter joint was extended the digits were firmly flexed on the palm. A thickened mass could be felt in the substance of the flexor muscle. There were no scars on the fore-arm.

In December, 1898, tendon-lengthening was performed. This patient had a very useful hand eleven months after the operation.

CASE II.—A girl, aged 6 years, sustained in May, 1898, a severe fracture above the left elbow-joint, and a fracture of the fore-arm bones. There was great swelling, the fragments were with difficulty kept in position, and a splint-sore formed about the middle of the back of the fore-arm.

When seen eight months later the condition resembled that in Case I, but the flexor contraction was more marked; both fractures had united, and the movements of the elbow-joint were good. The "lump" on the muscular part of the flexors was well marked.

In January, 1899, tendon-lengthening was performed on all the tendons save that of flexor carpi ulnaris.

The result was satisfactory, although at date was not so good as in Case I.

His method differs in some detail from that of Mr. Page, in so far that he joins superficial flexors by a loose suture immediately they are cut, to aid subsequent recognition before tying. He does not raise a flap, but operates through a median incision running up from the wrist for a distance of about 4 inches; and, finally, he puts up the parts in the extended position.

Mr. Page, in his article, refers to the *etiology* of this form of paralysis. He quotes Volkmann's opinion that the condition

is probably due to a process of severe inflammatory muscle-contraction, and not to primary nerve-paralysis from pressure; and that this contraction comes on very rapidly (in a few weeks), contrasting with the more chronic progress of the paralytic form. This was Volkmann's view in 1875. He next gives a *précis* of Volkmann's conclusions in a paper written in 1881. The gist of these conclusions is that the muscle-fibre perishes from deprivation of arterial blood, its contractile substance coagulates, breaks up, and disappears; the simultaneous onset of paralysis and contraction is characteristic; the repairing material thrown out in the muscle contracts still further.

He also quotes Kraske's observations on muscles in two legs which had undergone gangrene from exposure to cold. Kraske found complete loss of nuclei in many of the primitive fasciculi with the absence of striation, and a granular appearance of the fibres, and he compares the condition to what is seen after circular constriction of a limb.

Mr. Page remarks that there can hardly be a doubt that this form of paralysis is due to a combination of pressure, fixation, and ischæmia, and that the end-plates of the nerves are probably damaged as well as the muscle elements. This view is based on the presence of the reaction of degeneration which was obtained in his case by Dr. Harris. Mr. Littlewood attributes the condition in his cases to a laceration of the muscles when the fore-arm is displaced backwards with the lower end of the humerus. The torn muscle is then replaced by fibrous tissue, the contraction of which produces the deformity. This view, I think, is open to question, on anatomical grounds, the muscles in front of the joint, and which would therefore suffer, being the biceps and brachialis anticus.

Mr. William Anderson<sup>1</sup> describes a similar condition resulting from "interrupted evolution of the flexors of the fingers. . . . The causes are often obscure, but some examples have been traced to traumatic injuries (*sic*) of the flexor side of the fore-arm in infancy or childhood. . . . The essential factor appears to be a trophic lesion of local or central origin, which retards or arrests the due growth of a muscle, or a portion of a muscle, without causing its atrophy or paralysis."

The method of tendon-lengthening which I adopted, and which was also employed by both Page and Littlewood, is that introduced by Anderson. He relates the case of a girl, aged 17, on whom he had operated in September, 1889. A

<sup>1</sup> *The Deformities of the Fingers and Toes*, London, 1897, pp. 57 *et seq.*

small scar was seen 2 inches below the elbow, over the inner side of the front of the arm, the result of a fall thirteen years before. The contraction appeared shortly afterwards, but had been getting more rapidly worse during the preceding eighteen months, when she had been growing very quickly. Six months after the operation, the contraction was found to be gradually reappearing, probably on account of the rapid growth of the girl in the interval. She was advised to wait till fully grown before undergoing a secondary operation. He thinks that "the contraction evidently depended upon a trophic lesion, perhaps due to the injury in childhood, involving the ulnar portion of the flexor profundus, impeding the growth of the muscle, and so preventing it from keeping pace with the normal growth of the bone, but not causing paralysis. The contraction of the flexor sublimis was evidently secondary." He figures his method of lengthening the tendons, which he believes is original. He raises a flap by "a semicircular incision over the inner side of the front of the fore-arm, just above the wrist, the convexity overlapping the tendon of the flexor carpi ulnaris, the horns reaching to a line midway between the radial and ulnar border of the limb."

*Conclusion.*—The partial slough of the margin of the flap, which is much to be regretted, might be due to the presence of the splint which was applied to keep the fingers in the position of extension. It will be observed that Mr. Page, who used the flap method, put up the parts in the position of flexion, and obtained union by first intention; and it would perhaps be safer to use Littlewood's single incision if one is going to put up the limb in the extended position. My reason for making a flap was to place the skin wound at some distance from the seat of operation in the tendons, and at the same time to obtain a large field to work in.

The accidental section of the median nerve produced no ill effect, save, perhaps, the coldness and lividity of the middle finger mentioned above. This continued till the subcutaneous division of the adhesion between the skin-cicatrix and the tendons permitted freer movements in the limb.

## AUSCULTATION IN THE MANAGEMENT OF LABOUR.<sup>1</sup>

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### I. FŒTAL HEART SOUNDS.

*Historical.*—The foetal heart sounds were discovered accidentally by Mayor,<sup>2</sup> of Geneva, in 1818, while auscultating for foetal movements. Somewhat later, but independently, Kergaradec<sup>3</sup> made the same discovery, and he considerably advanced the subject of obstetric auscultation. Since his time much has been done to systematise the subject and place it on a firm basis.

*Rhythm.*—Kergaradec compared the sounds he heard to the ticking of a watch, which superficially they much resemble. Churchill<sup>4</sup> in an article on this subject draws attention to this point, and affirms that the rhythm of the foetal heart differs somewhat from that of the adult. He divides the cardiac cycle into four periods—the first two being occupied by the sounds and the latter two by the pause. He differs from other observers before him in thinking that the systolic sound is the fainter of the two, and that it is the second sound which is accentuated. Expressed in figures, it is thus 1<sup>2</sup>34. After birth of the child the rhythm becomes 1234; both sounds being followed by an equal pause. This gradually passes (after the second year) into the adult time, with the accentuation on the first sound, thus—1<sup>2</sup>34. I agree with Churchill in thinking that the accentuation is on the second sound.

*Incident.*—The usual time when the foetal heart can be first heard is stated to be from the eighteenth to the twentieth week. Underhill<sup>5</sup> has reported a case where he heard it between the thirteenth and fourteenth week. There can be no doubt that the time, when the sounds become audible,

<sup>1</sup> Read at a meeting of the Glasgow Obstetrical and Gynæcological Society held on 23rd May, 1900.

<sup>2</sup> Mayor, *Bibliothèque universelle de Genève*, Novembre, 1818, t. ix, p. 248.

<sup>3</sup> Kergaradec, *Mémoire sur l'auscultation appliquée à l'étude de la grossesse*, Paris, 1822.

<sup>4</sup> Churchill, "Rhythm of the Heart of the Fœtus," *Dublin Quarterly Journal*, 1855, vol. xix, p. 327.

<sup>5</sup> Underhill, *Edinburgh Medical Journal*, 1875, p. 267.



varies greatly, and so is of little use in fixing the probable date of confinement.

*Frequency.*—The variation in frequency of the foetal heart pulsations has given rise to much discussion, and it has received a corresponding amount of attention. Hüter,<sup>1</sup> in attempting to reconcile the discrepancies, points out that these may be due to national characteristics or geographical conditions.

The counting of the foetal heart beats is not such an easy matter as it appears. The sounds are often quite alike, and both may be counted.

The rate varies within the period of one minute, so a number of observations should be taken for periods of not less than fifteen to thirty seconds. The counting should be done between the pains and during a period of foetal quiescence, as movements naturally hasten the heart's action.

Authorities have given the following averages, which differ considerably from each other, thus—Carus,<sup>2</sup> 130; Naegele (father),<sup>2</sup> 135; Depaul<sup>3</sup> and Hohl,<sup>4</sup> 140; Dubois,<sup>2</sup> 144; Naegele (son),<sup>2</sup> 175. The limits, however, vary greatly—thus 120 to 180 beats per minute lie within the recognised normal range. Depaul mentions one case where the frequency rose to 210, without detriment to the child following. This has been explained by other observers, who state that both sounds have been counted. I have observed one case where the rate was 178. Below 120 must be considered pathological, and especially so if the rhythm is irregular.

According to Frankenhäuser<sup>5</sup> there is not much alteration in the frequency during the course of pregnancy. If such be the case, the size, which must vary with the age of the foetus, has nothing to do with the heart frequency. The rate of the pulsations will be settled as soon as the heart begins to beat, and for each particular ovum this will be fixed by a vital physiological law. This fundamental frequency may be influenced by size and sex; the rate depending on the vigour of the heart and the resistance it has to overcome.

<sup>1</sup> Hüter, "Ueber den Fötalpuls," *Monats. f. Geburtsk.*, Bd. xviii, Supp. Heft., S. 23.

<sup>2</sup> Citation from Cumming, *Edinburgh Medical Journal*, 1875, vol. xxi, part 1.

<sup>3</sup> Depaul, "Auscultation obstétricale" in *Dictionnaire des Sciences Médicales*, 1867, p. 301. (At end of this article is full list of articles on obstetric auscultation.)

<sup>4</sup> Hohl, *Die Geburtshülflche exploration*, Halle, Bd. i, S. 102, U. 170.

<sup>5</sup> Frankenhäuser, "Ueber die Herztöne der Frucht in ihre Benutzung zur Diagnose des Lebens der Stellung der Lage und des geschlechts derselben," *Monats. f. Geburtsk.*, Bd. xiv, Heft. 3, S. 161.

The circumstances which influence the frequency are—(1) Sex, (2) size, (3) maternal condition, (4) those affecting the circulation of the foetus.

1. *Sex*.—Frankenhäuser<sup>1</sup> made the discovery that the female foetal heart beats more rapidly than the male, and in his article he put down the figures as 124 for the male, and 144 for the female. Shortly after the publication of his paper, numerous others made their appearance controverting this observation.

Breslau<sup>2</sup> states categorically that neither during intra-uterine nor extra-uterine life does the foetal heart beat quicker in females, and, indeed, he gives the average for males as 119, and for females as 113.

Hennig<sup>3</sup> agrees with Breslau that the frequency of the foetal heart does not depend on the sex.

Haake<sup>4</sup> and Schurig<sup>5</sup> alike doubt the verity of the discovery of Frankenhäuser.

Zepuder<sup>6</sup> gives the average of 130 for males, and 144 for females, but says it is impossible to diagnose the sex beforehand: a guess only being possible—the result of several observations.

Engelhorn<sup>7</sup> puts down 137·7 as the average for males, and 140·8 as that for females, while in his cases the slowest were females, and the most rapid, males.

Steinbach,<sup>8</sup> on the other hand, thinks the idea of Frankenhäuser of some value, and at the present time it is generally conceded that the female heart beats slightly more rapidly than the male.

<sup>1</sup> Frankenhäuser, *loc. cit.*, p. 3.

<sup>2</sup> Breslau, "Ueber die Frankenhäuser'schen Entdeckung, das Geschlecht des Fötus durch Zählung der Herztöne erkennen zu können," *Monats. f. Geburtsk.*, Bd. xv-xvi, S. 437.

<sup>3</sup> Hennig, "Ueber die Häufigkeit der Herzschläge beim Fötus und bei Neugeborenen von verschiedenen Geschlechtern," *Monats. f. Geburtsk.*, Bd. xv-xvi, S. 449.

<sup>4</sup> Haake, "Ueber den Werth der Frankenhäuser'sche Entdeckung, aus der Frequenz der Fötalherzschläge das Geschlecht des Fötus zu bestimmen," *Monats. f. Geburtsk.*, Bd. xv-xvi, S. 456.

<sup>5</sup> Schurig, "Beitrag zur Vorausbestimmung des Fötalgeschlechtes durch Zählung des Fötal pulses," Inauguraldissertation, Leipzig, 1863, und *Monats. f. Geburtsk.*, Bd. xxi-xxii, S. 459.

<sup>6</sup> Zepuder, "Neure Beobachtungen über den Werth der Frankenhäuser'sche Theorie," *Zeitschrift f. praktische Heilkunde*, 1863, No. 2.

<sup>7</sup> Engelhorn, "Ueber die fötale Pulsfrequenz," *Archiv f. Gynäkologie*, Bd. ix, S. 360.

<sup>8</sup> Steinbach, "Zur Diagnose des Fötalgeschlechtes," *Monats. f. Geburtsk.* Bd. xvii-xviii, S. 428.

Owing to the wide variation from the average, it becomes very difficult to decide in any given case how much of the frequency of the foetal pulsation depends on the sex.

2. *Size*.—Engelhorn and Cumming<sup>1</sup> have mooted the idea that the foetal heart rate may depend on the size of the child.

Engelhorn has given the following table (in which the size of the child is gauged by its length) to show the ratio between size and heart frequency—

40-45 cm.	get 147·9 beats.
45-50 cm.	„ 137·9 „
over 50 cm.	„ 126·6 „

He thinks that this factor should be taken into consideration in attempting to diagnose the sex of the child *in utero*.

Cumming, on the other hand, has measured the size of the child by its weight. He placed his figures in the hands of a mathematician, whose calculations brought out the result that the male child gives 19 beats per lb.; the female child gives 20·2 beats per lb. He agrees to some extent with Frankenhäuser, but thinks that a certain relationship exists between weight of the child and frequency of its heart sounds. This latter statement somewhat modifies the precision of his averages. Cumming, however, gives no idea how the weight of the child is to be ascertained.

According to Ahlfield<sup>2</sup> and Sutugin<sup>3</sup> the length of the foetus equals twice the distance from the pubis to the fundus.

From cases occurring in the Maternity Hospital and elsewhere, though some ratio between length and weight and frequency of the foetal heart certainly was found, there are too many exceptions to allow of any definite conclusions being come to. On drawing out a table to show the relationship, if any, between weight, length, sex, and heart rate, there were so many irregularities that no hard and fast rules could be drawn. It is only possible to say that weight has more influence on the foetal heart than length, and if taken in conjunction with the frequency, aids in the ante-partum guess as to the sex of the child.

From consideration of the factors influencing the rate of the

<sup>1</sup> Cumming, "On the Uterine Souffle and Foetal Heart," *Edinburgh Medical Journal*, October, 1875, vol. xxi, part 1, p. 317 and p. 418.

<sup>2</sup> Ahlfield, "Bestimmungen der Grosse und des Alters der Frucht vor der Geburt," *Archiv f. Gynäkologie*, Bd. ii, p. 353.

<sup>3</sup> Sutugin, "On the Means of Ascertaining the Length of Gestation by Measurement of the Foetus and Gravid Uterus during the Second Period of Pregnancy," *Edinburgh Medical Journal*, 1875, part i, p. 869.

foetal heart, is it possible to determine the sex of the child previous to birth? Admitting that sex and size have each their influence,<sup>1</sup> are the data precise enough to warrant any prognostication in this direction? As the weight of the child can be estimated by palpation, with a fair amount of accuracy, while the foetal heart sounds may be correctly counted, I believe it is possible, by considering the weight, to increase the probability of a successful guess regarding the sex of the child in utero. The question has not been found soluble into such simple proportions as to enable one to say that so many beats per minute should accompany each male or female pound. Still the attempt is invariably made, and the surmise revealed to the patient. By doing so, a little wholesome humour is introduced into what otherwise might be considered a uselessly prolonged examination. In connection with the diagnosis of sex, there are said to be other factors which may guide one in the prognosis.

Drummond M'Donald,<sup>2</sup> in the correspondence column of the *Lancet*, has reported that where the abdomen is conoid and projecting the fruit will be a male, while if flatter and oval a female. As there is no standard abdominal conformation, it is difficult to see how this gives any help.

In Germany there is a popular idea that the more the complexion and the facial expression are altered and marred, the more likely is the child to be a female. This is referred to in Hohl's<sup>3</sup> work, and he gives it his support.

Stockton-Hough,<sup>4</sup> in discussing the question, ascribes the idea to Avicenna.

Carlile<sup>5</sup> has reported that with male conception the nipple and areola are very dark. There are a number of other expressions of opinion on the diagnosis and causation of sex, more or less vague. Finally, the diagnosis of sex from the foetal heart must be what may be termed a fortified guess.

3. *Maternal Influence*.—Various reports are given as to influence of the maternal pulse-rate on that of the offspring. It is generally accepted that, unless the maternal pulse is accelerated by some cause which operates through the cir-

<sup>1</sup> Schroeder, *Geburtshülfe* (Olshausen & Veit), 1888; Spiegelberg, *Midwifery*, Sydenham Society Translation.

<sup>2</sup> M'Donald, *Lancet*, 1883, vol. i, p. 222.

<sup>3</sup> Hohl, *loc. cit.*, p. 3.

<sup>4</sup> Stockton-Hough, *American Journal of Obstetrics*, 1884, vol. xvii, p. 115.

<sup>5</sup> Carlile, *Medical Record of New York*, May, 1880, p. 554 (from Stockton-Hough).

cultation, little effect is produced on the foetal heart. In cases of enteric fever and small-pox, the foetal pulsations rose in rapidity with the pulse, and especially with the temperature of the mother.<sup>1</sup> Hüter<sup>2</sup> discusses this subject fully, and gives details of cases where the pulse of the foetus was influenced by that of the mother. Excitement and exercise, though they raise the maternal pulse, have no bearing on that of the foetus.

Naylor<sup>3</sup> reports a series of cases where observations, taken two hours after meals, showed the foetal heart to be acting more rapidly than in the period previous to the ingestion of food. If this is the case, it is difficult to explain, and is quite contrary to the general opinion.

#### 4. *Conditions affecting the foetal heart frequency through the circulation.*

(a) Churchill<sup>4</sup> mentions that ergot slows the heart; due probably to the interference with the placental circulation by the uterine contraction.

(b) The pains of labour first hasten, then slow, the foetal pulse. At their height the foetal heart sounds may be inaudible.

(c) Pressure on, or other interference with, the cord, sufficient to impede the circulation, rarely fails to affect the heart sounds, either in frequency, regularity, or character. Numerous cases have been reported regarding this point. Schatz<sup>5</sup> gives an example where pressure with the stethoscope over the region of the child's neck reduced the speed by one half, and led to the correct diagnosis of coiling of the cord round the neck. He also mentions a similar case reported by Rodner.

Two cases were reported by me in the *British Medical Journal* of August, 1897 (where the head was prevented from engaging by a cord becoming too short by being wound round the child's neck). In neither case was a funic souffle heard, but in one the pains entirely obliterated the sounds, while in the other they produced marked alterations in rhythm and intensity. Wygodzki<sup>6</sup> reports dystocia from the same

<sup>1</sup> Engelhorn, *loc. cit.*; reports of Fiedler in *Monats. f. Geburtst.*, Bd. xix, Heft. vi, S. 471 (enteric), and small-pox; Hohl.

<sup>2</sup> Hüter, *loc. cit.*, p. 2.

<sup>3</sup> Naylor, "Observations Demonstrating the Influence of Digestion in the Mother upon the Frequency of the Foetal Pulse," *Edinburgh Medical Journal*, 1876, vol. xxi, 2, p. 1004.

<sup>4</sup> Churchill, *loc. cit.*, p. 1.

<sup>5</sup> Schatz, *Archiv f. Gynäkologie*, Bd. xxv, S. 159.

<sup>6</sup> Wygodzki, "Eine siebenmalige Nabelschnurumschlingung um den Hals des Kindes als Geburtshindernis," *Centralblatt f. Gynäkologie*, 1895, No. 21, p. 561.

cause. Kauffmann<sup>1</sup> reported a case requiring the forceps. Rachel<sup>2</sup> also has reported five cases of dystocia due to this relative shortening of the cord, but in his signs, for diagnosis of the condition, no mention is made of those found on auscultation, which are by far the most important. It is, of course, a question whether, when traction is put on the funis round the neck, the foetal heart sounds are interfered with, because of obstruction in the cord or in the large vessels of the neck.

Prolapse of the cord, without compression, will give no sign of its presence during auscultation, but the signs, on palpating, will reveal the primary abnormality.

(d) Auscultation of the foetal heart is of much importance in helping to arrive at a decision regarding interference on behalf of the child.<sup>3</sup> Extreme rapidity of the foetal heart's action is quite compatible with a normal and healthy child, and does not necessarily imply danger. Quite another matter is preternatural slowness. When the rate is below 100-120, there is evidently some interference with the circulation. As has been already remarked, slowness combined with diminution in volume or with irregularity is of serious import for the infant. Frankenhäuser mentions that it is a grave sign for the child when, after reposition of a prolapsed cord, the heart sounds remain at 80. Irregularity, combined with slowness, is a more urgent sign for hastening delivery than bradycardia alone.

The absence of the foetal heart sounds contraindicates Cæsarean section.

Pressure on the cord occasionally alters the characters of the sounds, and substitutes for the first sound a murmur, V.S. in rhythm. This will be referred to under the head of funic souffle.

*In the diagnosis of pregnancy.*—The observation of foetal heart sounds is of the "certain" signs of pregnancy the most certain. In every case after the seventh month these sounds should be heard if the child is alive. A deep layer of liquor amnii between the stethoscope and the child will mask the sounds, but sinking the stethoscope till the resistance of the solid foetus is felt will overcome this. The masking of the

<sup>1</sup> Kauffmann, "Nabelschnurumschlingungen als Geburtshindernis," *Monats. f. Geburtsk.*, Bd. xiv, Heft. 3, S. 175.

<sup>2</sup> Rachel, "Five Cases of Dystocia from Coiling of the Cord around the Neck of the Fœtus," *American Journal of Obstetrics*, vol. xvii, p. 918.

<sup>3</sup> Hoeft, "Beobachtungen über Auscultation der Schwängern," *Neue Zeitschrift f. Geburtsk.*, 1838, Heft. 1, S. 1.

sounds in normal cases is usually due to adventitious noises, so the phonendoscope gives little aid in the diagnosis.

*In the diagnosis of twins, &c.*—Kergaradec<sup>1</sup> was the first to apply auscultation to the ante-partum diagnosis of twins. Nagle<sup>2</sup> claimed to have been the first in this country to have done so. It is on record that Naegele (son)<sup>3</sup> diagnosed triplets by this means.

The diagnosis of pleural conception by palpation is usually easy, but by auscultation alone it is more difficult. The presence of two distinct areas of maximum intensity is a very uncertain sign. The hearing of both foetal hearts acting together, but with different rhythms, is, however, circumstantial evidence.<sup>4</sup>

*In the diagnosis of presentation, &c.*—Finding the area of maximum intensity above the umbilicus is strongly suggestive of breech presentation. The use of the umbilicus as a landmark is of very questionable validity, and will therefore diminish the value of this sign as an aid to the diagnosis of presentation or position. Taken in conjunction with palpation the foetal heart sounds are of great utility, especially where the back is anterior. Auscultation, too, is best performed after careful palpation. When we know the attitude of the child, we are able to place the stethoscope on the spot where the foetal heart should best be heard.

In facial presentations, where the thorax of the child is pressed against the uterine wall, the situation of maximum intensity is said to be directly over the foetal heart<sup>5</sup>—i.e., the foetal heart is best auscultated on the same side as the limbs;<sup>6</sup> indeed, in facial presentations Attensamer,<sup>7</sup> Duval,<sup>8</sup> Fischel,<sup>9</sup> Fleischmann,<sup>10</sup> and Valenta<sup>11</sup> have asserted that the cardiac pulsations of the foetus were directly palpable.

<sup>1</sup> Kergaradec, *loc. cit.*, p. 1.

<sup>2</sup> Nagle, *Lancet*, 1830-31, vol. i, p. 232.

<sup>3</sup> Naegele (son), citation from Depaul.

<sup>4</sup> Küneke, "Ueber das Erkennen der Zwillingschwangerschaft," *Gottingen, Monats. f. Geburts.*, 1861, Bd. xxi-xxii, S. 319.

<sup>5</sup> Depaul, *loc. cit.*, p. 3; Schroeder's *Geburtshülfe* (Olshausen and Veit), 1888, S. 138.

<sup>6</sup> Leopold and Spörlin, *Archiv f. Gynäkologie*, Bd. 45, S. 361.

<sup>7</sup> Attensamer, Dissertation in Würzburg, 1885.

<sup>8</sup> Duval, "Palpation of the Foetal Heart Impulse in Pregnancy," *Johns Hopkins Hospital Bulletin*, Baltimore, 1897, vol. viii, p. 207.

<sup>9</sup> Fischel, *Prager Med. Wochens.*, 1881, No. 12, 28.

<sup>10</sup> Fleischmann, *Centralblatt f. Geburts.*, 1885, No. 49, 35.

<sup>11</sup> Valenta, *Centralblatt f. Geburts.*, 1885, No. 45.

Where the area of maximum loudness is below the umbilicus, the probability is that the presentation is a cranial one, though in transverse cases the heart sounds will be in much the same situation as in cranial.

During the progress of labour the auscultation area descends with the child, and the sounds, often inaudible in their former site, are readily heard immediately over the pubis.

It is asserted that the right or left position can be diagnosed according as the sounds are best heard right or left of the middle line. This is even more fallacious than the diagnosis of position from palpation of the child's back. Lateral flexion of the uterus may carry the child bodily towards one or other side, irrespective of the position of its back.

In dorso-posterior positions the area of maximum intensity becomes very wide; conduction of the sounds taking place through the limbs. The situation of the sounds is in these cases quite useless for the diagnosis of position.

## II. FUNIC SOUFFLE.

*Historical.*—The funic souffle was discovered and so named by Evory Kennedy<sup>1</sup> in 1830. He believed it to be caused by pressure on the cord, and this is generally accepted. This is very different, however, from affirming that the sound is produced in the cord.

*Nature.*—Dakin<sup>2</sup> remarks that the sound is without doubt produced in the cord from pressure. Devilliers<sup>3</sup> agrees with this. Dakin and Kennedy<sup>4</sup> remark that the cord may not infrequently be felt to lie over the back of the child. Kehrer<sup>5</sup> reports a case where the cord was felt on abdominal palpation, and pressure with the stethoscope produced the souffle. He believes the sound is produced in the cord. Naegele (M. H. F.)<sup>6</sup> asserted that the sound was rarely absent in coiling of the cord round the neck. Frankenhäuser<sup>7</sup> says it is produced by (1) winding of cord (especially a thin one) round foetal parts, (2) knots in the cord, (3) prolapse of cord. He mentions that

<sup>1</sup> Kennedy, *Dublin Hospital Reports*, vol. v, 1830.

<sup>2</sup> Dakin, *Handbook of Midwifery*, 1897, p. 63.

<sup>3</sup> Devilliers, *Union Médecine*, No. 11, 1854, from *Monats. f. Geburtsk.*, Bd. 3, S. 234.

<sup>4</sup> Kennedy, citation from Leishman's *Midwifery*, fourth edition, p. 190.

<sup>5</sup> Kehrer, "Zur Aetiologie des Nabelschnurgeräuches," *Archiv f. Gynäkologie*, Bd. xii, S. 258.

<sup>6</sup> Naegele, citation from Depaul.

<sup>7</sup> Frankenhäuser "Ueber Nabelschnurgeräuch, Nabelschnurdruck, und Hirndruck," *Monats. f. Geburtsk.*, Bd. xv-xvi, S. 354.



light pressure is sufficient to produce it, while more complete stops the souffle, and he thinks it is a sign of winding of the cord round the child's neck, &c. Four cases are cited by him, in all of which the funic souffle had been heard previous to the birth of stillborn children with the funis round their necks. According to this writer the sound is produced in the funic arteries. Dubois<sup>1</sup> thought it connected with the foetal heart. Carrière<sup>1</sup> is not dogmatic, and remarks that the murmur cannot be produced after birth by pressure on the cord.

Depaul<sup>2</sup> has found the souffle immediately after birth, and disappearing on the second day. Massmann<sup>3</sup> has reported a case where the souffle was heard *in utero*, and mitral disease of the child's heart was found at the *post-mortem*. He, however, omitted to auscultate the heart after the child's birth. The possibility of the murmur being produced in the cord is denied by him; he doubts if it is even produced by pressure on the cord. Schroeder<sup>4</sup> says that when it is from heart disease the murmur should persist post-partum. Hüter<sup>5</sup> and Schwartz<sup>6</sup> think the souffle is a V.S. heart murmur. Beck, Hohl, and Kiwisch<sup>7</sup> agree that the funic souffle is an altered first cardiac sound. Scanzoni<sup>8</sup> says it is due to a functional heart murmur, because the sound is too loud to be produced in the small vessels of the cord. Spiegelberg<sup>9</sup> states that the murmur rarely arises in the foetal heart. Bumm,<sup>10</sup> in an elaborate article on the funic souffle, comes to the following conclusions:—

1. The souffle is due to temporary valvular insufficiency from anomalies in nutrition, function, &c.
2. It is due to changes in cardiac tension.
3. External pressure. Pressure applied to thorax of infant often produced the murmur.
4. Pressure on the cord, by increasing the action of the

<sup>1</sup> Dubois and Carrière, citation from Depaul.

<sup>2</sup> Depaul, *loc. cit.*, p. 3.

<sup>3</sup> Massmann, "Fall von Nabelschnurgeräuch," *Monats. f. Geburtst.*, Bd. iv, S. 82.

<sup>4</sup> Schroeder, *loc. cit.*, p. 13.

<sup>5</sup> Hüter, "Ueber den Fötalpulz," *Monats. f. Geburtst.*, Bd. xviii, Supp. Heft, S. 23.

<sup>6</sup> Schwartz, citation from Hüter; *Die Vorzeitigen Athembewegungen*, Leipzig, 1856.

<sup>7</sup> Kiwisch, Beck, and Hohl, cited from Bumm.

<sup>8</sup> Scanzoni, *Lehrbuch der Geburtshülfe*, 4te auf, S. 162.

<sup>9</sup> Spiegelberg, *loc. cit.*, p. 7.

<sup>10</sup> Bumm, "Zur Aetiologie des Nabelschnurgeräuches," *Archiv f. Gynäk.*, Bd. xxv, S. 277.

heart, changes the first sound into a murmur. Though pressure produces the murmur, that does not mean that the murmur is produced in the cord.

5. The souffle cannot be heard post-partum because of the instantaneous changes produced by respiration.

6. The site of the sound changes with the position of the child and with the heart sounds.

According to Frankenhäuser<sup>1</sup> the souffle may be heard during the last two months of pregnancy, and perhaps for longer. He states that it is often heard far from the area of the foetal heart sounds.

The murmur is heard in a large number of cases where the cord is not round the neck. In a recent case of my own, during auscultation, suprapubic pressure (in the region of the neck) produced a murmur masking the first sound. The experiment was repeated a number of times with the same result. The bruit began shortly after the pressure was applied. It became intensified with continued pressure, and was accompanied with a slowing of the foetal heart rate. After the removal of the pressure the murmur persisted for from ten to twenty seconds. On delivery the cord was found round the neck of the child, as was suspected. Previous careful palpation of this region made me almost sure that the cord was under observation. Spöndli<sup>2</sup> has reported a case where the souffle was accompanied by coiling of the cord round the neck.

The characteristics of this murmur have convinced me that it is produced in the foetal heart or large vessels entering it. Compression of the cord slight enough to cause some change in the tension of the general circulation, by merely delaying the return of the arterial blood through the umbilical vein, might quite readily lead to the development of a murmur. Before pressure became sufficient to interfere with the stream in the umbilical arteries, the circulation in the veins would be stopped completely. Thus, slight pressure on the cord will reduce the supply of oxygenated blood to the foetus, and the want of blood will produce a fall in cardiac tension, and so a hæmic murmur will be produced, just as occurs in the anæmia of hæmorrhage. Further, the deprivation of oxygen will cause slowing of the foetal heart. The murmur conveys the impresson to the ear that it is situated in the foetal heart. To say that this cannot be so, because the bruit may be heard with a pure first sound, is to forget that the heart sounds are produced in the foetus, as in the adult, from

<sup>1</sup> Frankenhäuser, *loc. cit.*, p. 15.

<sup>2</sup> Spöndli, *Monats. f. Geburtsh.*, Bd. iii, S. 198.

a right and left heart acting together. The hæmic murmur in the adult, with its wide distribution, may co-exist with a normal heart sound. The functional murmur may be in the right heart or large vessels while the normal first sound is in the left. The fact that the bruit produced by pressure in the groove of the neck in the case referred to did not immediately cease on withdrawal of the pressure, goes far to show that that murmur was not produced in the cord locally, but in the heart by compression of the cord.

The frequency with which this murmur is heard, and its fitful character, lead me to suppose that it will be present in every case at one time or another during the course of pregnancy.

*Indications.*—When the murmur is continuous a cause should be looked for. Apart from the suspicion of winding of the cord round the child's neck it has little practical bearing on the management of labour. Where the suspicion of this is present, numerous examinations with the stethoscope should be resorted to, and any change in the foetal heart sounds, in the way of excessive diminution, loss of intensity, or irregularity, is an indication for interference on behalf of the child. As soon as the neck comes within reach the cord should be sought for.

That firm pressure on the funis does not cause this murmur is probably because the pressure is too effective, and by interfering with the blood-supply of the heart prevents it from displaying its usual energy, as is evidenced by the diminution in the frequency of its pulsations.

### III. FŒTAL MOVEMENTS.

It was during the search for these sounds that Mayor<sup>1</sup> discovered the foetal heart sounds. They are to be heard earlier<sup>2</sup> in the course of pregnancy than those due to the foetal heart. They become more evident about the fourth month, and are of much value in the diagnosis of pregnancy and of the life of the child. Intestinal sounds sometimes simulate them.

Movements of individual limbs give naturally somewhat different impressions from more generalised ones. The former may be only a gentle friction sound or a more sudden tap, while the latter give the impression of extreme violence and

<sup>1</sup> Mayor, *loc cit.*, p. 1.

<sup>2</sup> Nægele, *Die Geburtshilfe Auscultation*.

turmoil, due to multiplication of thumps from, and friction between, the various moving parts. The movements may be rhythmic in character, but are quite distinct from those of the foetal heart. Meyer<sup>1</sup> has reported a case where he heard the jaw performing a series of movements for periods of a second, at the rate of from 250-300 per minute. After birth of the child the chittering was continued, and led to the identification of the sounds heard ante-partum. He remarks that these tremors are not due to cold, but to a nervous manifestation.

#### IV. UTERINE SOUFFLE.

Like so many other points connected with obstetric auscultation, this was first noted by Kergaradec. The uterine souffle synchronous with the maternal pulse is to be heard usually somewhat before the foetal heart, according to Depaul,<sup>2</sup> from the tenth week. It reaches its maximum loudness about the seventh month, and is usually best heard on the left side, due probably to the right rotation of the uterus.<sup>3</sup> Griffith<sup>3</sup> thought that this theory would not explain the peculiarity. Herman<sup>3</sup> and Champneys<sup>4</sup> agree that a souffle of a higher pitch was more characteristic of the uterus than of a uterine tumour. The bruit is usually considered to be produced by the flow of blood through the large arteries coursing along the lateral aspects of the uterus in the broad ligaments.<sup>5</sup> The murmur is present in almost every case, and is usually to be heard on both sides, though Champneys<sup>6</sup> heard it on the right side alone in one case out of thirty-three. It can sometimes be obliterated by pressure, but the sound itself is not due to the pressure of the stethoscope. It sounds close to the ear, and gives the impression of having a superficial origin as compared with the heart sounds. Kiwisch<sup>7</sup> says it may be occasionally produced in the epigastric arteries, and in this Spiegelberg concurs.

Formerly various opinions were held regarding its etiology. The discoverer thought the souffle was produced by the placenta.

<sup>1</sup> Meyer, "Zweiselte Auskultations-phänomene bei einer Schwangeren," *Centralblatt f. Gynäkologie*, No. 28, S. 904.

<sup>2</sup> Depaul, *loc. cit.*, p. 3.

<sup>3</sup> Naegele, citation from Depaul.

<sup>4</sup> Champneys, "The Uterine Bruit," *Lancet*, 1886, vol. ii, p. 123; Griffith and Herman, in the discussion following the above paper by Champneys.

<sup>5</sup> Depaul, *loc. cit.*, p. 3.

<sup>6</sup> Champneys, *loc. cit.*, p. 21.

<sup>7</sup> Kiwisch, citation from Spiegelberg's *Midwifery*, Sydenham Society Translation, vol. i, p. 144.

Nagle<sup>1</sup> has written a long article against this theory. Laennec and Carrière<sup>2</sup> assigned the murmur to the large arteries of the placenta, which Depaul<sup>3</sup> remarks do not exist. Evory Kennedy<sup>4</sup> affirmed that the sound depended on the utero-placental circulation. Jacquemier<sup>5</sup> imagined it due to pressure on the pelvic arteries, while Hans<sup>5</sup> and Bouillaud<sup>5</sup> adopt the view that the murmur is in the aorta or iliac vessels.

Death of the fœtus has little influence on it, and it may be heard after birth of the fœtus and placenta. It is a sign of pregnancy of much value, being most frequently a sequence of conception. Otherwise, for practical purposes, it is of little importance.

#### V. MUSCULAR SUSURRUS.

This is due to the contraction of the uterus, and is a muscle sound. The vibrations of the contracting muscle are so rapid as to give rise to an almost continuous hum. Braxton Hicks<sup>6</sup> has reported a case where the vibrations of the contracting recti abdominis were so slow as to lead to their being mistaken for very rapid fœtal heart sounds, being quite countable at 180 per minute. This occurs in these muscles during protracted labour when they are in a state of half suspension.

#### VI. PLACENTAL SEPARATION BRUIT.

Caillant<sup>7</sup> has drawn attention to a sound heard on separation of the placenta. A vibratile sensation of tearing is sometimes perceived when the hand is controlling the fundus after expulsion of the child, and while the placenta is separating. Doubtless, were one listening at the moment, a sound corresponding to the fremitus would be heard, as crepitation in a fracture, besides being a palpable, is also an auscultatory sound. If such always exists, it is of only secondary importance.

<sup>1</sup> Nagle, *loc. cit.*, p. 12.

<sup>2</sup> Laennec and Carrière, citation from Depaul.

<sup>3</sup> Depaul, *loc. cit.*, p. 3.

<sup>4</sup> Kennedy, *Lancet*, 1830.

<sup>5</sup> Jacquemier, Bouillaud and Hans, citation from Depaul.

<sup>6</sup> Hicks, "Note on the Muscular Susurris in Relation to the Fœtal Heart Sounds," *Obstetrical Transactions*, vol. xv, p. 187.

<sup>7</sup> Caillant, 1852, citation from Depaul.

THREE CASES CURED BY SURGICAL OPERATION  
IN JOHNSTONE DISTRICT HOSPITAL.

By W. WESTWOOD FYFE, M.B., C.M.

CASE I.—*Case of strangulated inguinal hernia (right) in a female—Operation for radical cure (Macewen's)—Recovery.*

Miss B. O., between 50 and 60 years of age, came under my care in the winter of 1899, for operative treatment of a strangulated right inguinal hernia. Family history was phthisical, although, personally, patient had always enjoyed good and robust health until within the last year, when she began to be troubled with constipation, and somewhat later first noticed a "swelling" or "lump" over the lower part of the abdomen, which gradually grew larger and seemed—as the patient expresses it—to be travelling upwards on the abdomen. The swelling caused her no pain or discomfort until two days before admission to hospital, when she was suddenly seized with acute pain over the tumour, accompanied by sickness and vomiting. An enema was at once ordered, and taxis resorted to, but without avail, before coming to hospital. On her arrival there, examination showed a large tumour, of a more or less cylindrical shape, extending from the body of the right pubis upwards and outwards towards the anterior spine of the ilium, a distance of 7 or 8 inches. It was exceedingly hard and resistant to the touch. Percussion yielded a dull sound. There was a very slight impulse felt, on coughing, at the pubic end of the tumour.

Chloroform was administered, and taxis again tried, but without making the slightest impression.

The history of the tumour, with the sudden onset of acute pain, sickness, and vomiting, led us to believe that the tumour was hernial, and most probably consisted of omentum with a small piece of bowel.

An incision was made over the prominence, when we found that the tissues external to the sac were so very much attenuated and atrophied, that it was impossible to differentiate the structures—so well enumerated in text-books and lectures—from the superficial and deep fascia.

The external wall of the sac was laid bare in its entirety, which necessitated prolonging the incision to 6 inches. The tumour now brought in sight was of a very dark brown or chocolate colour, hard and irrissonant, measuring 6 inches long, with a circumference of  $1\frac{1}{2}$  to 3 inches. The wall—

which was, of course, the parietal surface of the peritoneum or sac—was firmly adherent to the external tissues in some places, particularly at the neck of the sac close to the external abdominal ring. This part of the tumour—the neck—was extremely narrow and very highly constricted by the ring, so much so that it was with difficulty the point of an hernia knife could be introduced when making small incisions. On opening the sac, the hernia was found to consist of omentum and a very small knuckle of bowel, the latter part being immediately outside the ring, and of a very dark colour, but with its lustre still preserved. The greater part of the hernia was omental, and this explained the hard and resistant characters found previously; this fact also was explanatory as regards the absence of pain during the early stage of the tumour. There was no fluid inside the sac. I presume the “swelling” noticed for so long by the patient was chiefly, if not wholly, an omental hernia, and that the pain and sickness only came on when the bowel was pressed through the ring and became strangulated. I had to make a good number of small incisions in the ring before the bowel could be returned into the abdominal cavity. The omentum was likewise replaced without excising any part of it. Macewen’s operation for radical cure was performed, and the external wound sutured with chromicised catgut.

Patient was sorely troubled with sickness and retching after operation, for which she was given one quarter grain morphia suppositories, ice to suck, brandy and milk, and, later, dry champagne. Flatus was passed the day following operation, and, sickness abating, nourishment consisted of essence of beef, extract of beef, and peptonised milk, gradually given at stated intervals for fourteen days.

Pulse kept normal, and temperature never rose above 99°.

An enema was given on eighth day, and a small quantity of fæces discharged. On the fourteenth day an aperient moved the bowels easily and satisfactorily.

#### CASE II.—*Double oöphorectomy for severe ovarian pain—Recovery.*

Miss B. O., 29 years of age, consulted me towards the end of last year, regarding very severe and persistent pain in lumbar region of back, and in both the right and left hypogastric regions. Family history is unimportant, except to show that two or three members of the family were decidedly phthisical. As a child, patient suffered from the usual diseases of childhood, such as whooping-cough, measles, croup, bronchitis, and

had three attacks of scarlet fever, the last attack when she was 20 years of age. Present illness, *i.e.*, pain, began about eight years ago, shortly after last attack of scarlet fever, and although not very troublesome at first, gradually increased in severity. The pain became more continuous, and latterly never disappeared. Menstruation came on at the age of 15, and has always been irregular as regards duration and quantity, three weeks, as a rule, elapsing between two periods, and each lasting seven or eight days. The catamenia greatly aggravated pain. The right side only became painful two years ago, six years after the left.

Five years ago, a London gynæcologist was consulted, who diagnosed contraction of the cervix and retroflexion, and sent patient to an Edinburgh surgeon, who dilated and split the cervix (February, 1895).

This operation was the means of allaying the pain for a short time only—two months—after which it returned more severe than formerly, causing sickness and fainting very often.

In December, 1899, patient first came under my charge. At this time pain was intolerable. An external examination showed nothing except tenderness in each hypogastric region, but on making an examination *per vaginam*, I found the uterus slightly retroflexed, the cervix (anterior and posterior lips) elongated to a great degree, and tenderness on pressing into Douglas' pouch. I could not make out the presence of any enlargement or growth.

Being unwilling to perform the major operation for excising the ovaries in an unmarried lady, I advised, first of all, that dilatation should be tried, and this was done on 24th December, Professor Murdoch Cameron's dilators being used. As a result of this, the pain was slightly relieved, but in a short time—three months—it returned to much the same degree as before.

Considering the history of the case, and the number of times patient had submitted to dilatation without relief for any length of time, I was not surprised when the desire to have the major operation performed was expressed by the patient. Accordingly, it was decided to remove both ovaries, with the hope that the pain would be considerably, if not wholly, allayed. Operation was performed in May of the present year, when the following condition was found. Left ovary partially prolapsed, congested, and cystic. Right prolapsed to a greater degree than left, congested, and extremely cystic. Both ovaries were adherent to surrounding peritoneum, particularly the right one, which was very strongly attached



to the upper part of Douglas' pouch, and this accounted, I think, for the tenderness felt on making a *per vaginam* examination.

Ligature of stout chromic catgut used, and external wound closed in usual way with same material. Operation was borne well, although sickness and retching were troublesome for a few days.

Pulse and temperature remained normal, and patient made an excellent recovery.

Pain disappeared wholly in the third week, and has not returned since.

CASE III.—*Oöphorectomy for prolapsed ovary—Recovery.*

In October, 1899, I was consulted by Mrs. B. C., for a very severe continuous pain in back and left hypogastric region, which had tortured her for three months previously.

Patient is aged 26, with two children. Family history unimportant, and personal only interesting at a period two years ago (1897), when patient suffered from two "fits," which were purely of an hysterical nature.

On admission to hospital in November, 1899, she complained of severe pain in the sacral region, also in front, sometimes in both sides, but chiefly in the left. The pain, when more severe than usual, produced faintness, headache, and sickness, and was continuous, although aggravated at the monthly periods, when it also assumed more of a bearing-down character than at other times.

On external examination little evidence could be got as to the cause of the pain, except when the uterus was pressed upon from the left hypogastric region. But on making a *per vaginam* examination, an oval-shaped body could distinctly be felt, lying in the reflection of peritoneum, behind the uterus—Douglas' pouch—and this when touched, even gently, caused great pain and sickness. Uterus was also slightly retroflexed.

The oval body felt so distinctly, and producing the sickening pain, suggested that the ovary had prolapsed into Douglas' pouch, and was more or less congested and adherent. I suspect the prolapse became most pronounced two years ago when the hysterical fits came on.

Considering these facts, an operation was decided on for removal of the ovary, and the patient was kept three weeks in bed for the purpose of building up her strength, which was very considerably reduced. During these three weeks the pain did not abate, although she was treated medicinally with

that object, and was taking food fairly well. She improved in strength, but remained very hysterical.

On 3rd December operation was performed, and the condition found was as diagnosed. Left ovary prolapsed into Douglas' pouch, adherent to peritoneum, congested, and with twisted broad ligament. Adhesions were soft and easily broken without causing hæmorrhage. Stout carbolised silk used for ligature, in the form of a Staffordshire knot.

On ovary being examined after removal, it was found to be cystic.

External wound closed in usual way with chromicised catgut.

Patient bore operation well, and made an excellent recovery. Temperature and pulse kept normal. Pain disappeared on the fifth day after operation, and patient is now able to go about her usual household duties free from that distressing symptom.

## CURRENT TOPICS.

**GLASGOW UNIVERSITY: CHAIR OF CLINICAL MEDICINE.**—Dr. Samson Gemmell, Professor of Practice of Medicine in Anderson's College, has been appointed by the University Court Professor of Clinical Medicine, in succession to Professor M'Call Anderson, transferred to the Systematic chair.

**UNIVERSITY OF GLASGOW.**—The following have passed the first professional examination for the degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (B, Botany; Z, Zoology; P, Physics; C, Chemistry):—

Andrew Blair Aitken (B, P).  
 William Smith Allan (B, Z).  
 Andrew Allison (B, P).  
 Andrew Woodroffe Anderson (B, P).  
 Donald Arbuckle (P).  
 Robert James Arthur (B, Z).  
 John Bain (C).  
 Hugh Barr (B).  
 Allan Robertson Barrowman (B, P).  
 Archibald Grainger Bisset (B).  
 Charles Brown (P).  
 John Brown (C).  
 George Yuille Caldwell (B).

No. 5.

John Paterson Carmichael (Z).  
 Peter Carrick (B, Z).  
 Robt. Buchanan Carslaw, M.A. (P, C).  
 William Smith Craig (C).  
 Robert Wilson Dale (B, P).  
 Thos. Thornton Macklin Dishington (Z, C).  
 Allan Campbell Douglas (B, P).  
 Charles Milligan Drew (B, Z, C).  
 Walter Duffy (B).  
 John Shaw Dunn (B, P).  
 John Ferguson (B, Z, P, C).  
 Charles Conway Fitzgerald (Z, C).

2 A

Vol. LIV.

Edward John Fitzgerald (z, c).  
 Hugh Harvey Fulton (B, P).  
 William Gilchrist (c).  
 William Harold Gillatt (P).  
 Joseph Glaister (B).  
 James Glover (P, c).  
 Alexander Graham (B, P).  
 David Livingstone Graham (B, P).  
 Donald John Gollan Grant (B, P).  
 Alexander Robertson Forrest Hay  
 (B, z, P).  
 James Waugh Hay (B, z).  
 John Cochrane Henderson (z, P, c).  
 Lawrence Hislop (B).  
 Ralph Howell (B, z).  
 Alexander Hunter (c).  
 James Hunter (B, P).  
 Archibald Yuill Hutchison (B, z, P, c).  
 Harry Stewart Hutchison (B, P).  
 Alexander Jamieson (B, c).  
 Arnold Ernest Jones (B, P).  
 Douglas Robertson Kerr (B, z).  
 James Rutherford Kerr (B).  
 George Notman Kirkwood (z, c).  
 Robert Wright Leckie (c).  
 Donald MacAulay (B, z, P, c).  
 Ernest Bowman Macaulay (z, c).  
 Thomas Symington Macaulay (B, P).  
 Donald Carmichael M'Cormick (c).  
 Joseph Glaister M'Cutcheon (B, c).  
 John Finlay Macdonald (B).  
 Neil M'Dougall (c).  
 James Boston M'Ewan (c).  
 Tom Duncan M'Ewan (B, P).  
 Duncan Macfadyen (B, P).  
 John M'Farlane (B, P).  
 Robert Macfarlane (B, P).  
 Alexander Stewart Murray Macgregor  
 (B, P).  
 Milne M'Intyre (B, c).  
 Charles Gordon Mackay (B, c).  
 David James M'Leish (B, z, P).  
 Norman Alexander Macleod (P).  
 Roderick Macleod (P).  
 Alexander Stewart M'Millan (P).

Matthew Thompson Drummond  
 M'Murich (B, P).  
 Norman Smith Macnaughtan (P, c).  
 Richard Cameron Macpherson (B, c).  
 William Main (P, c).  
 James Marshall (z, c).  
 William Blair Morton Martin (B, P).  
 Andrew Meek (B, P).  
 John Moffatt (P, c).  
 William Struthers Moore (z, c).  
 Gavin Denholme Muir (P).  
 John Muir (z, c).  
 Macdonald Munro (B).  
 Frank Anderson Murray (B).  
 George Clement Nielson (B, P).  
 Thomas Orr (B, z, P).  
 Howard Henderson Patrick (B, P).  
 Arthur Geoghegan Paxton (z, c).  
 John Pearson (B, P).  
 John Clegg Pickup (B, z).  
 Andrew Maclean Pollock (B, P).  
 Henry Sherwood Ranken (B, P).  
 Donald Ronald Reid (B, P).  
 Daniel Falconer Riddell, M.A. (z, c).  
 Daniel Stevenson Richmond (P, c).  
 James Watson Richmond (c).  
 Alexander Robertson (B, P).  
 Berkeley Hope Robertson (c).  
 William Rolland (B, P).  
 John Macdonald Ross (P, c).  
 Edward Louis Sieger (P).  
 Robert Wilfrid Simpson (B, z).  
 Alexander Hunter Sinclair (z).  
 Morrison Wood Smith (B, P).  
 James Alexander Somerville (z).  
 James Stevenson (P).  
 Archibald Stewart (B).  
 William Stewart (z).  
 William Craig Stewart (c).  
 William Templeton (z, c).  
 James White Thomson (B, P).  
 Alexander M'Millan Watson (P).  
 Thomas Macknight Watt (c).  
 Archibald Crombie West (B, P).  
 David Watson Wilson (P).

## WOMEN.

Bethia Shanks Alexander (z, c).  
 Annie Agnes Baird (B, z, P).  
 Roberta Campbell (B, z).  
 Margaret Hardy (z).  
 Agnes M'Phun (B).  
 Florence Mann (B, z).  
 Jessie Emily Munro (P).

Edith Oversby (z).  
 Jessie Deans Rankin (B, z).  
 Harriett Rowland Louise Reid (P, c).  
 Margaret Eason Robertson (B, z).  
 Jane Reid Shaw (B, z).  
 Lily Smellie (z).  
 Mary Spence (B, z).

The following have passed the second professional examination for the Degrees of Bachelor of Medicine (M.B.) and Bachelor of Surgery (Ch.B.) in the subjects indicated (A, Anatomy; P, Physiology; M, Materia Medica and Therapeutics):—

William Armitage (P).  
 Thomas Ballantyne (P, M).  
 Alexander Grey Banks (M).  
 Andrew Baxter (P).  
 Andrew Farm Bell (M).  
 James Campbell Bringan (A).  
 Robert Bruce (M).  
 Robert Bryson (P).  
 George Frederick Buchan (A).  
 Angus Campbell (M).  
 Robert Harold Campbell (A, M).  
 Alexander Adam Carruthers (A, P, M).  
 Robert Peopie Cartwright (A).  
 Walter Bartlett Chapman (A, M).  
 John Cairns Christie (P, M).  
 Samuel Campbell Cowan (A, P, M).  
 Ernest Hamilton Cramb (A).  
 Hugh William Crawford (M).  
 John Cross (P, M).  
 Alexander Dick (A, P, M).  
 William Dick (P).  
 Donald Douglas, M.A. (A, P, M).  
 Andrew Robertson Dow (A).  
 William Dow (A, P, M).  
 John Ferguson, M.A. (P).  
 Thomas Forsyth (A, P).  
 John Andrew Garden (A, P, M).  
 George Garry (A).  
 John Ritchie Gilmour (A).  
 John Miller Gordon (M).  
 John Andrew Hagerty (M).  
 Ronald Dingwall Hodge (P).  
 John Monnette Huey (M).  
 John Brown Dalzell Hunter (M).  
 Neil M'Coll Hutchison (P, M).  
 Ernest David Jackson (M).  
 George Rutherford Jeffrey (M).  
 William Fletcher Kay (M).  
 Andrew Miller Kerr (M).  
 William Henry Kirk (A).  
 Archibald Leitch (P).  
 Stanley Everard Lewis (A).  
 Thomas Lovett (M).  
 Daniel Douglas M'Dougall, M.A. (M).

Alexander Macintyre (M).  
 Ivy M'Kenzie, M.A. (A, P).  
 John Chancellor M'Kenzie (A, P, M).  
 Thomas M'Laren (P).  
 James Roy M'Vail (A, P).  
 Robert Harry Manson (A, P, M).  
 Harry Somerville Martyn, M.A. (A, P, M).  
 Robert Menzies (P, M).  
 Alexander John Mitchell (M).  
 John Muir (A, M).  
 James Stuart Nicolson (A, P).  
 David Penman (M).  
 Thomas Rankine (M).  
 John Mark Reid (M).  
 David Riddell (M).  
 William Robertson (P, M).  
 James Russell (A, P, M).  
 John Samson (M).  
 Robert Clemens James Schlomka (P, M).  
 Frank Donald Scott (M).  
 Malcolm Bernard Gathorne Sinnette (A).  
 John Williamson Smith (M).  
 Robert Cassels Smith (M).  
 John Stevenson (A, P, M).  
 John Barbour Stewart (P).  
 Robert Rennie Swan (A).  
 John Allan Thom (A, P, M).  
 John Restell Thomas (A, M).  
 William Wagner Turner (A, P, M).  
 Robert Wallace (P).  
 Thomas Irby Wallace (P, M).  
 Robert Watson (M).  
 Alexander Brown Watt (M).  
 Peter Millar Waugh (A).  
 Robert Tait Wells, M.A. (A, P).  
 John Forrest Weston (M).  
 Joseph White, M.A. (A, P).  
 John Wilson (M).  
 Eldred Wright (M).  
 Watson Young (P).

WOMEN.

Helen Stephen Baird, B.A. (A, P).  
 Jane Campbell (P, M).  
 Kate Fraser, B.Sc. (A, P).

Ethel MacLeod Lochhead (M).  
 Martha Hunter Scott (M).  
 Edith Christine Wallace (P, M).

The following have passed the third professional examination for the degrees of Bachelor of Medicine (M.B) and Bachelor of Surgery (Ch.B.) in the subjects indicated (P, Pathology; M, Medical Jurisprudence and Public Health):—

John Anderson (M).  
 Robert Wellwood Auld (M).  
 John Stoddart Barr (M).  
 Ernest Cecil Burnett (P, M).

Samuel James Cameron (M).  
 Andrew Currie (P, M).  
 John Sheddon Dale (M).  
 David Beattie Davidson (M).

James Davidson, M.A. (P, M).  
 Gregor Hugh Grant Davie (M).  
 William Elder (P, M).  
 William Watt Farrar (P, M).  
 George Ferguson (M).  
 Duncan Johnston Fletcher (P).  
 William Gemmill (P, M).  
 Matthew Hunter (M).  
 David Kyle, M.A. (M).  
 Alexander Linn (P, M).  
 Frank Joseph Lochrane (M).  
 Joseph Paterson Lusk (P).  
 William Ferguson M'Glashan (P).  
 Hugh Archibald M'Lean (P, M).  
 Alexander M'Gaw M'Millan (P, M).

Allan Dixon Mitchell (P, M).  
 Samuel Johnston Moore (P, M).  
 John Morison (P, M).  
 Robert Orr (M).  
 James Nimmo Prentice (P, M).  
 Robert Ramsay (M).  
 John Walker Renton (P, M).  
 William Robertson, Kilmarnock (M).  
 James Crawford Ross (P, M).  
 James Smith (P, M).  
 Joseph Goodwin Tomkinson (M).  
 John Wright Turner (M).  
 Robert George White, M.A., B.Sc.  
 (P, M).  
 James Wilson (P, M).

## WOMEN.

Martha Adams (P, M).  
 Janet Thomson Miller (P, M).  
 Alice Moorhouse (P, M).

Agnes Bankier Sloan (P, M).  
 Elizabeth Macfarlane Sloan (P, M).

At the above professional examinations for the degrees of M.B., Ch.B., the following candidates passed with distinction in the subjects indicated :—

*First Examination.*—In *Physics and Chemistry*: Robert B. Carslaw, M.A. In *Botany and Physics*: David J. M'Leish, William B. M. Martin. In *Botany*: John S. Dunn, Arnold E. Jones, Donald R. Reid, William Rolland. In *Zoology*: Jessie D. Rankin. In *Physics*: Tom D. M'Ewan, Duncan Macfadyen, Andrew M. Pollock, Alexander Robertson, James W. Thomson. In *Chemistry*: John Bain, Charles M. Drew, James Glover, Donald MacAulay, Berkeley H. Robertson.

*Second Examination.*—In *Anatomy and Physiology*: Joseph White, M.A. In *Physiology*: Donald Douglas, M.A.; Kate Fraser, B.Sc. In *Materia Medica and Therapeutics*: Alexander G. Banks, John C. Christie, John B. D. Hunter, George R. Jeffrey, Andrew M. Kerr, Daniel D. M'Dougall, M.A.; John Muir, John M. Reid.

*Third Examination.*—In *Pathology*: James Crawford Ross. In *Medical Jurisprudence and Public Health*: John Stoddart Barr, Samuel James Cameron, Robert Ramsey.

**ANDERSON'S COLLEGE MEDICAL SCHOOL.**—Dr. R. S. Thomson has been appointed Professor of Practice of Medicine in succession to Professor Samson Gemmell.

**ROYAL INFIRMARY.**—The following appointments have been made for the winter six months :—

*House-Physicians.*—A. W. Harrington, M.B., assistant to Dr. Dougall; John C. Douglas, L.R.C.P.E., &c., assistant to Dr. M'Vail; Leonard Findlay, M.B., assistant to Dr. Middleton; E. H. Roberts, L.R.C.P.E., &c., assistant to Dr. Lindsay Steven; Norman M. Leys, M.B., assistant to Dr. Monro.

*House-Surgeons.*—Thomas B. Adam, L.R.C.P.E., &c., assistant to Mr. Clark; P. H. Rainbird, M.B., assistant to Dr.

Barlow; H. C. Ferguson, M.B., assistant to Dr. Adams; A. L. Watson, M.B., assistant to Dr. Newman; J. W. Leitch, M.B., assistant to Mr. Knox; G. M. Crawford, M.B., assistant to Mr. M'Lennan; H. O. Smith, M.B., assistant to Mr. Pringle.

*Ophthalmic Department.*—A. Garrow, M.B., assistant to Dr. Maitland Ramsay.

*Gynæcological Department.*—Ellen M'Donald, assistant to Dr. Kelly.

**WESTERN INFIRMARY.**—The following appointments have been made for the winter six months:—

*House-Physicians.*—Alexander Wilson, M.B., assistant to Professor M'Call Anderson; William Barr Pollock, M.B., assistant to Dr. Finlayson; Charles P. Thomson, M.B., assistant to Professor Gemmell.

*House-Surgeons.*—David M. Cowan, M.B., and James F. Bennett, M.B., assistants to Professor Macewen; Peter A. Steven, M.B., assistant to Professor Sir Hector C. Cameron; James R. Chalmers, M.B., assistant to Dr. Patterson; James D. Laidlaw, M.B., assistant to Dr. Renton; Ed. Provan Cathcart, assistant to Dr. Beatson.

*Gynæcological Department, &c.*—John Gracie, M.B., Ch.B.

*Throat Department and Isolation Wards.*—Robert Nelson, M.B., C.M.

**THE GLASGOW SOUTHERN MEDICAL SOCIETY.**—The opening meeting of the Glasgow Southern Medical Society was held on Thursday, 4th October, in the rooms of the Southern Medical Club, 18 South Portland Street. The following office-bearers were elected:—*Hon. President*, Sir Hector Clare Cameron, M.D., F.F.P.S.G.; *President*, William Watson, M.D.; *Vice-Presidents*, John Stewart, M.D., and William M'Millan, M.B., C.M.; *Treasurer*, Andrew S. Tindal, M.D.; *Secretary*, J. Fraser Orr, M.D.; *Editorial Secretary*, Andrew Wauchope, M.B., C.M.; *Seal Keeper*, John Coulson Howie, M.A., M.B., C.M.; *Extra Members of Council*, Alex. C. M'Arthur, M.B., C.M., Duncan Macgilvray, M.B., C.M., Alex. Roxburgh, M.D.; *Court Medical*, Hugh Kelly, M.D., Robert H. Parry, L.R.C.P., F.R.C.S., James W. Allan, M.B., C.M., Alex. Rankin, M.D., Robert W. Forrest, M.D.; *Representative to Victoria Infirmary*, Charles E. Robertson, M.D.

The annual dinner of the Society was held on Thursday, 18th October, in the St. Enoch Station Hotel. A large and representative gathering of medical gentlemen assembled under the chairmanship of Dr. William Watson, President of the

Society. Dr. John Stewart and Dr. Wm. McMillan acted as croupiers. Sir Hector C. Cameron, Hon. President, was the guest of the evening, and among others present were Principal Story and Professors John Glaister and R. Stockman. At the close of a well-served repast, the Chairman proposed "The Queen and Royal Family" in felicitous terms. To Dr. John Stewart was assigned the toast of "The Navy, Army, and Reserve Forces"—proposed in excellent words—and replied to by Surgeon Lieutenant-Colonel Napier. Dr. R. H. Parry then gave the toast of "Our Honorary President," and in doing so made reference to the honours which had recently fallen on the shoulders of Sir Hector Cameron. From Her Majesty the Queen he had received the honour of Knighthood, and by the University he had been selected for the Chair of Clinical Surgery; and it seemed appropriate that about the same time he should be elected to the position of Hon. President of the Glasgow Southern Medical Society. Sir Hector Cameron, in responding, thanked those present for the cordial manner in which they had received the toast. While he valued the honours of which lately he had been the recipient, he could not but feel gratified with the knowledge that he was also receiving honour at the hands of his own professional friends. He could assure them that it would be a source of pleasure to him to be of service at any future date to the Southern Medical Society. Dr. Eben. Duncan proposed the toast of "The University," and emphasised the lamentable position of laboratory accommodation in the medical faculty. Principal Story, in acknowledging, said that the present wants of the University resolved themselves into one of finance. He was glad to be able to inform them that already some of these wants had been supplied. For some time laboratory extensions had been in progress, and he hoped that at an early date further extensions would be inaugurated. To this end money was required, and he felt convinced that, as soon as the wealthy men of Glasgow realised the present needs, the necessary funds would be forthcoming. The other toasts which followed included "Our Society," proposed from the chair; "Kindred Societies," proposed by Dr. Macgilvray and replied to by Professor Glaister and Dr. S. Sloan; "Our Guests," by Dr. J. W. Allan, acknowledged by the Rev. D. McCorquodale; and "The Chairman," by Dr. C. E. Robertson.

Oxo (Liebig's Extract of Meat Company) is a new fluid beef (so-called). It is a soft solid, of a dark colour, and possesses an agreeable odour quite suggestive of a meat

extract. We can testify that a teaspoonful dissolved in a teacupful of boiling water will yield a delicious beverage, without the addition of salt or any flavouring agent. The manufacturers call special attention to the low price—viz., 10d. per 2-oz. bottle.

TRAUMATOL (Oppenheimer, Son & Co., Limited, London) is an iodide of cresylic acid, which is issued in the form of a concentrated solution called *liquid traumatol*. The latter is a brownish liquid, readily miscible with water, possessing but slight odour, and, when applied to the tongue, pungent for a moment. This strong liquid, when diluted with water, is suitable for use as a gargle or lotion. It is said to be non-toxic and non-irritant.

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## MEETINGS OF SOCIETIES.

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### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

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SESSION 1899-1900.

MEETING XIII.—4TH MAY, 1900.

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DR. W. G. DUN *in the Chair*.

#### I.—CASE OF PROBABLE ADDISON'S DISEASE ASSOCIATED WITH LEUCODERMIA AND TUBERCULOSIS.

BY DR. R. BARCLAY NESS.

Dr. Ness's paper will be found as an original article in our issue for October, 1900, at p. 252.

#### II.—CASE OF FRIEDREICH'S DISEASE, WITH ATROPHY IN THE LEFT LEG.

BY DR. W. K. HUNTER.

J. M., aged 15, was admitted to Ward 7 on 9th April, 1900, complaining of loss of power in the legs and difficulty in walking.

The parents date the illness from the time patient was 3 years old, but it was not till he reached the age of



7 that the symptoms became in any way prominent. He began to walk when 2 years old, and at that time he is said to have been very active on his feet. Then he seems to have



FIG. 1.

J. M., æt. 15.

had some illness, probably rickets, for he ceased to walk, and, indeed, could not stand; but a year later he was walking again fairly well. It is only recently that he has again had so much difficulty in walking.

The father thinks that the one leg developed better than the other, and he says he has noticed the left thinner than the right for the past seven years. He says, too, that the present

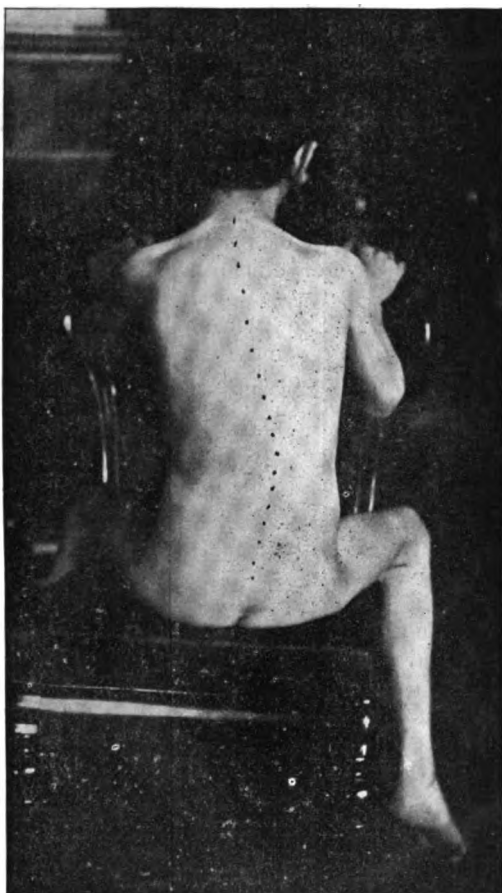


FIG. 2.  
J. M., æt. 15.

condition of knock-knee is quite recent. Some three or four years ago the heels began to be drawn up, and on this account an operation was undergone in the Western Infirmary. The dorsal curvature has been noticeable for at least three years.

Patient seems to have got on well at school, being quite intelligent and having a good memory. His writing, however, was bad, owing, he says, to a shaking in his hand, and on this account he was not permitted to pass the fifth standard.

The general health is said to have been fairly good. Patient had scarlet fever, measles, and whooping-cough in early childhood. There have been no convulsions. For the past four or five years he has had a certain degree of deafness, and this has steadily been getting more pronounced.

*Family history.*—Father and mother are alive and well. Patient is one of six children, two of whom died in infancy (only a few weeks old). The other three (a boy 18, a girl 10, and a boy 5) are alive and in good health. An uncle was born wanting a hand, but other than this there is no history of deformity or of nervous ailment among any of the relations.

*Present condition.*—The patient has a somewhat vacant expression, the lips being constantly kept apart, and the lower lip allowed to droop. From time to time a slight involuntary tremor or spasm is noted in the muscles at the angle of the mouth and in the muscles of the lower lip. The head, too, presents certain slight and ill-defined movements, as if there were difficulty in its being held quite steady. There is no atrophy of any of the muscles of the face, and the voluntary movements of these muscles seem normal. There is no nystagmus, nor paralysis of any of the muscles of the eyeball. The palate is highly arched. Dentition is fairly complete, except that the two front incisors of the upper jaw are completely rotted away. The patient speaks with a lisp, but this is probably due to the loss of these teeth, and the speech otherwise is unaffected.

The head tends to fall forwards on to the chest, but there seems to be no paralysis of the muscles of the neck, for the head can readily be retracted, and, indeed, it can perform all its ordinary movements. As the patient sits in bed there is a marked general dorsal curvature, which does not disappear as he attempts to hold himself straight or as he lies on his face. When he stands, a lumbar curvature (lordosis) also becomes prominent. In addition to these antero-posterior curvatures, there is a lateral curvature, most marked in the lower dorsal region, the convexity being towards the right. The lower portion of the chest is somewhat pigeon-shaped.

There is no evidence of atrophy or paralysis in any of the muscles of hands, arms, shoulders, or trunk. There seems, however, to be some inco-ordination in the arms, especially

when the eyes are shut, for the patient has difficulty in picking up pins and other small articles, and he never succeeds in touching accurately the point of his nose. Indeed, there may be said to be a lack of precision in all the movements of the arms, and although no definite tremor is present, a certain unsteadiness is apparent in the hands as the patient holds them out in front of him. He writes slowly and very laboriously, seeming to use all the muscles of his hand so as to steady the pencil. The muscles of the arms feel rather flabby, and no definite tendon reflexes have been obtained.

There is distinct atrophy in the muscles of the left leg, the circumference at the middle of the left thigh being 1 inch less than at the same place in the right thigh, and at the middle of the left calf  $1\frac{1}{2}$  inch less than at the middle of the right calf. This atrophy seems to affect equally all the muscles of the left leg. It is difficult to be certain whether or not there is any atrophy in the muscles of the right leg. There is a certain amount of flexion at both knee-joints, evidently the result of a permanent shortening of the hamstring muscles, for at these joints the limbs cannot be fully extended.

There is a well-marked double *pes cavus*. The movements of the legs as the patient lies in bed are apparently performed with difficulty, but how much of this is due to the contraction, and how much to inco-ordination, of the muscles it is very difficult to estimate. There seems to be a certain amount of adductor rigidity. No knee reflex nor ankle clonus has been obtained. There is no reaction of degeneration in any of the muscles, and, indeed, the electrical reactions are practically normal.

There seems to be some loss of sensation, and chiefly for that of pain, in the lower limbs; but it is impossible to draw any definite conclusion from the examination owing to the variations in the patient's replies. The error, as far as can be made out, is most marked in, and involves chiefly, the lower half of the left leg. The plantar, cremasteric, and abdominal reflexes are present, but they are not by no means active. The pupil reflexes are normal.

When the patient tries to stand up, his legs give way under him, and he requires support to prevent falling. If he falls he cannot rise again without help, and he is quite unable to walk by himself. Even with assistance progression is very difficult. The gait is cross-legged in type, each knee and foot being brought in front of the other, the foot coming to the ground with a stamp. Patient says he has no difficulty in appreciating the true feeling of the floor.

*Remarks.*—I have classed this case as one of Friedreich's ataxy, not because it is a typical example, but because in its symptoms and general appearance it conforms more closely to that disease than to any other with which I am familiar. The patient has the facies and general attitude of Friedreich's disease. Then there is the inco-ordination in the arms and legs, the loss of knee-jerks, the dorsal curvature, and the double *pes cavus*. On the other hand, however, the case is isolated, there is no nystagmus, the speech is not elisive, sensation is affected, and there is atrophy in the muscles of one leg. Of these negative symptoms, the only one to cause remark is the last; for the other symptoms—history of hereditary nystagmus, affection of speech, and intact sensation—are by no means constantly present in all cases of Friedreich's disease. But I am somewhat at a loss to explain the atrophy in the left leg.

Dégérine (*La Médecine Moderne*, 12th June, 1890) has described two cases of Friedreich's disease, with marked atrophy in both arms and legs. But in these cases the atrophy was a progressive muscular atrophy of the Aran-Duchenne type, and quite different to that of the case we are now considering. Here the atrophy seems to affect equally all the muscles of the leg, and, as far as I can find out, it is not progressive.

Perhaps the best explanation one can give is to consider the atrophy as resulting from an old and slight infantile paralysis (anterior polio-myelitis), which has affected all the muscles of the left leg, and which, to a large extent, has been recovered from. The permanent atrophy of a number of fibres in each muscle would account for the loss in bulk, and the recovery of the remaining fibres for the practically unaltered electrical reactions. According to this view, then, the atrophy of the leg is an "accident" setting in prior to, or occurring in the course of, Friedreich's disease.

### III.—CASE OF PSEUDO-HYPERTROPHIC PARALYSIS.

By DR. W. K. HUNTER.

A. M., æt. 12, was admitted to Ward 7 on 9th April, 1900, the complaint being that he was stiff and unable to go about like other boys, that he was easily tired, unsteady on his feet, and that when he had fallen down he had great difficulty in rising up again.

The onset of this condition seems to have been very gradual,

the parents saying that they never noticed it coming on—that it was always there. The child did not attempt to walk till he was 2 years old, and he never walked well, there always being something stiff about him. It was not, however, till he was 5 or 6 years of age that his parents specially directed their attention to his condition. But they can give no definite account of the progress of the symptoms beyond saying that recently he has lost flesh considerably, and that his general strength has become greatly impaired.

Measles is the only other ailment he has had.

*Family history.*—The patient is one of a family of nine, only three of whom are now living. Of those dead, three (aged 19 months, 5 months, and 4 years) died of meningitis, one of pneumonia, one when six weeks old, and one was stillborn. The other two living are girls (aged 14 years and 10 years), and they are both healthy and well developed. The father and mother and the four grandparents were healthy. The father's brothers and sisters all died in infancy, the oldest not being more than 4 years old. The mother was one of a family of twelve (six boys and six girls), all of whom were healthy, except three brothers who seem to have suffered from some form of myopathy. In their case the illness came on when they reached the age of 10, and two died when 14 and one at 16. Their ailment is said to have been precisely similar to that of our patient, but it is difficult to get such details of their symptoms as to make it quite certain that they also were cases of pseudo-hypertrophic paralysis.

*Present condition.*—The patient is bright and intelligent, and of average height for a boy of his age. When he stands up his attitude is characteristic, the feet are kept wide apart, the shoulders are thrown back, and the lumbar curve is very marked. He walks with a waddling gait, and his manner of rising from the ground is quite typical of this form of paralysis. He has great difficulty in going up stairs, and, indeed, he cannot do so without pulling himself up by means of the banister.

There is a great degree of muscular weakness, especially in the arms and legs. There is apparent hypertrophy in the muscles of the calf of each leg, and possibly also in the tibialis anticus muscles, but there is no structural shortening in any of these muscles. The circumference of the right calf is 10 inches, and of the left 10½ inches. There is enlargement of the vastus muscles of both sides, and also of the glutei muscles. Possibly there is some atrophy in the adductors of the thigh. It is difficult to say if the lumbar muscles are

affected or not, but they seem weak, and probably there is also some apparent enlargement. There is marked atrophy in the pectoral muscles, and, indeed, the lower portions of the pectoralis major muscles are almost entirely gone. There is atrophy in the talissimus dorsi, in part of the biceps, and, to a less degree, in the triceps. The deltoids and serratus magnus muscles seem unaffected, but the infrapinatti and supraspinati show well-marked hypertrophy. The muscles of the face and neck are unaffected.

There is considerable lividity and coldness of both hands and feet, but there is no error of sensation. The patellar tendon reflexes are absent, and the plantar reflexes unduly active.

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#### MEETING XIV.—11TH MAY, 1900.

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DR. W. G. DUN, *in the Chair*.

TWO EXAMPLES IN MEN OF SEVERE AND PROLONGED ATTACKS OF ASTHMA, ASSOCIATED WITH, AND APPARENTLY DEPENDENT UPON, THE PRESENCE OF NASAL POLYPI, EXTIRPATION OF WHICH RESULTED IN COMPLETE IMMUNITY FROM ASTHMATIC SYMPTOMS.

BY DR. WALKER DOWNIE.

Dr. Downie's paper will be found as an original article in our issue for October, 1900, at p. 249.

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#### SESSION 1900-1901.

#### MEETING I.—5TH OCTOBER, 1900.

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*The Vice-President*, DR. J. W. ALLAN, *in the Chair*.

I.—TENDON-LENGTHENING IN A CASE OF VOLKMANN'S ISCHÆMIC PARALYSIS.

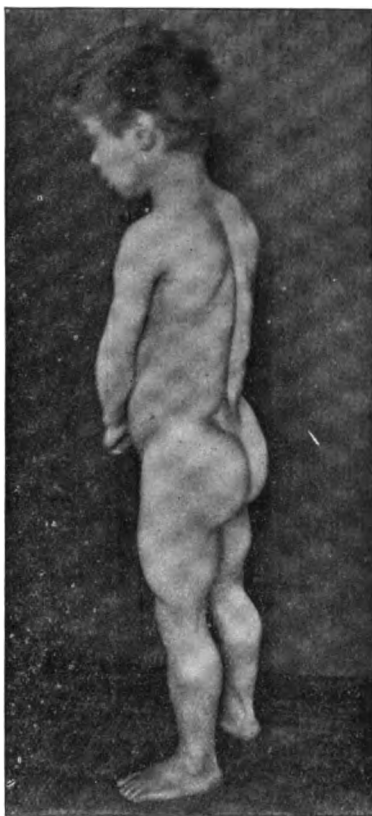
BY DR. G. H. EDINGTON.

Dr. Edington's paper appears as an original article at p. 344.

II.—CASE OF PSEUDO-HYPERTROPHIC PARALYSIS.

By DR. W. K. HUNTER.

J. H., æt. 8, was admitted to Ward 7 of the Glasgow Royal Infirmary on 4th September, 1900, his complaint being



J. H., æt. 8.

of weakness in his back, of great helplessness, and of being unable to rise from the ground without aid.

It is difficult to obtain any definite information as to the onset of the illness. The patient did not begin to walk till he was three years old, and he is said never to have walked well; but the walking has been getting much worse in the



past twelve months. He cannot now go any considerable distance, and he is constantly tumbling and hurting himself. For the past six months he has not been able to rise from the ground without assistance. He is said to have become much thinner in the past year.

He had enteric fever when 7 months old, and measles and whooping-cough eighteen months ago.

The father and mother are alive and well. Our patient is the eighth of ten children. One died when 11 months old; the others (three boys and five girls) are all alive and well. There is no history of any similar disease in any of the grandparents, uncles, or cousins.

The patient is rather small for his age. He measures 3 ft. 6 in., and weighs 3 st. 1 lb. The palate is highly arched. The muscles of the jaws, face, and neck are unaffected. There is marked enlargement of the deltoids and infraspinati muscles, and atrophy of the pectoral and latissimus dorsi. The biceps and triceps are also considerably wasted. The muscles of the hands are unaffected, but there is slight, though undoubted, increase in size of all the muscles of both fore-arms. The muscles of both legs are greatly hypertrophied, and this affects not only the flexors but also the extensors of the feet. The circumference at the middle of the calf is  $10\frac{1}{4}$  in. The quadriceps femoris is involved, but much more so in its outer aspect. The adductors are possibly slightly atrophied. The flexors of the knee are considerably hypertrophied. The circumference at the middle of the thigh measures 13 in. There is no permanent flexure at the knee or ankle-joints. The glutei, lumbar, and also the abdominal muscles all show considerable enlargement. The gait is waddling, and the patient is very unsteady on his feet. He cannot go up or down stairs unless holding on to the banister. He cannot rise from the ground without aid, and it is even with difficulty that he turns himself round in bed.

The patellar reflexes have not been obtained. The condition of the internal organs seems quite normal.

*Dr. J. Wallace Anderson* said that he thought such cases ran a much less rapid course than text-books seemed to indicate. He has had a similar case under observation for seven years, and the lad is now 18 years of age.

## III.—ON A NEW FORM OF HANDLE FOR MOUNTED HALF-CIRCLE NEEDLES.

BY DR. ALEX. MACLENNAN.

The use of a finely curved needle seems to the novice one of the easiest of the mechanical acts of surgery; yet such is not the case, as he finds out on his first attempt. The needle either breaks in the process of insertion or when the point is grasped for its withdrawal—the point is “blunt,” or the “tissues remarkably tough”—often, however, it is really owing to the want of deftness on the part of the operator.

It should be remembered that, when using the needle-holder armed with the half-circle needle, the eye should be little raised from the skin while the point is entering it. This embodies a principle which applies equally to curved mounted needles of all kinds—viz., that the point must be pressed into the skin in the direction of the tangent to the circle, part of which is formed by the needle. The needle is not to be twisted in, nor must the rotatory action begin till the needle has pierced the skin; thus needle-holder and needle move directly downwards, the point being kept at a level slightly lower than that occupied by the head.

Once the needle enters the skin, its path is its own; still it is always better that the hand guide the needle, and not *vice versa*.

When the deeply embedded half-circle needle is being withdrawn, by grasping its point with the needle-holder, the needle will break unless the circular motion used in its insertion be also employed in its withdrawal.

One great merit claimed for the half-circle needle is its suitability, not only for the insertion of superficial sutures, but of buried ones, such as are *par excellence* employed in repair of the female perineum.

The needle must trace out through the tissues the other half of a circle, so that the point of the needle leaves the skin at the spot where the eye of it originally was, thread and needle together forming a complete circle. In its insertion, transit, and exit the needle must rotate about an imaginary centre situated half between its point and eye.

The usual form of needle-holder is not adapted to produce this movement, nor can it be easily fitted to the various sizes of half-circle needles.

In the pattern shown the point of the needle is almost on the same plane as one of the bars of the handle, and the

handle rotates about an imaginary axis, which, if continued, would pass through the centre of the circle described by the needle. The point is slightly raised above the plane of the rest of the needle, so that it may not come in contact with whatever the needle is resting on. Then, again, when using such a needle, one always knows where the point of it is. This is important. This rotation movement employed in passing a half-circle needle of the above pattern is the simple movement of supination from full pronation.

The reason for bringing such a detail before the profession is that often the needles made on the ordinary plan break at some critical moment, and imperil the success of important operations.

#### IV.—OCULAR HEADACHE.

BY DR. JAMES HINSHELWOOD.

Dr. Hinshelwood's paper appears as an original article at p. 335.

### REVIEWS.

*Rheumatism, Rheumatoid Arthritis, and Subcutaneous Nodules.* By C. O. HAWTHORNE, M.D., M.R.C.P. London: J. & A. Churchill. 1900.

IN this little volume we have, from the pen of Dr. Hawthorne, a most valuable clinical essay on a very interesting subject.

The essay has been suggested by the well-recognised circumstance that it is impossible to attach a precise definition to the terms rheumatism and rheumatic, and its object is to show that no definition yet proposed can be dogmatically asserted. As the author points out, his thesis is doctrinal rather than practical, but, notwithstanding, we venture to assert that a perusal of his pages will not be without result in rendering more apparent the difficulties which surround the subject, and in freeing the mind of that tendency to dogmatism which is the enemy of all true progress. We agree with him in thinking that, until the etiology of rheumatism is placed on a satisfactory scientific basis, dogmatism is impossible.

The essay consists of three parts. The first is one of the most masterly expositions of the literature and history of

a morbid state that we have read for a long time. It is philosophical and judicial in every statement, and bears throughout the influence of that master-mind under whom the author received his clinical training.

The second part contains an exhaustive account of illustrative cases, and the third is a supplement giving fuller details of the views of authorities on the matter. The whole essay is a masterpiece of literary and clinical research.

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*Diseases of the Nose and Throat.* By J. PRICE-BROWN, M.B.  
Philadelphia: The F. A. Davis Company. 1900.

The author of this work, now a well-known specialist on disease of the throat and nose in Toronto, was for nearly twenty years engaged in general practice, and this book is the outcome of his knowledge of the needs of the general practitioner when brought face to face with diseases of those organs.

The book contains close on 500 pages, and yet several subjects, which are usually discussed in works dealing with those special departments, are left out, and the reader is referred to works on general medicine, on ophthalmology and otology, to fill the gaps.

Amongst the subjects not discussed, or rather referred to in but one line as a reflex disturbance not infrequently resulting from the presence of nasal polypi, is asthma. Now, the relationship between intranasal lesions, polypi, turbinal hypertrophies, septal deformities, and asthma is one of great importance, and the interested reader looks for its full discussion in a work like that before us. Then, again, diseases of the frontal sinus are omitted as "coming usually under the domain of the oculist they have been left entirely to his care" by the author. In this country diseases of the frontal sinus, for the most part, are seen and diagnosed in the early stages by the rhinologist, and are treated by operation, or otherwise, before the eye is implicated. And in dealing with purulent discharge from the nose, a knowledge of the frontal sinus is all important. The exclusion of diphtheria may be more reasonably defended, yet both the student and the general practitioner would not lose by the inclusion of an up to date *résumé* of this disease, as it affects the throat, of the best means of verifying the diagnosis, and of the present-day line of treatment.

While thus taking exception to the "omissions," one would

wish to bear testimony to the care with which the volume has been prepared, to the clearness of the diction, the practical character of treatment recommended, which is largely the fruit of personal experience, and to the excellence of many of the illustrations. Of the latter, the coloured drawings of frozen sections of the head, showing the relations of the buccal and nasal cavities, with the various communicating cavities, call for special praise.

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*Diseases of the Throat, Nose, and Ear.* By P. M'BRIDE, M.D. Third Edition, Revised and partly Rewritten. Edinburgh and London: Young J. Pentland. 1900.

THIS volume, which is the third edition of Dr. M'Bride's very well known work, forms one of Pentland's medical series. The two previous editions were favourably reviewed in these pages on their publication, and the same opinion may again be expressed regarding the suitability of this work as a text-book for students and practitioners of medicine.

In the present volume the arrangement of the subject-matter is identical to that adopted in the preceding editions. Since the appearance of the second edition there has been great literary activity in the domains of laryngology, rhinology, and otology, and considerable care has been taken to incorporate in this edition much of what has been done in those departments in the interval, and thus have the volume brought well up to date.

The author and publisher alike are to be congratulated on the excellence of the work now presented to the profession.

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*Diseases of Children: A Manual for Students and Practitioners.* By GEORGE M. TUTTLE, M.D. London: Henry Kimpton. 1900.

THE aim of the book, the author tells us in his preface, "has been to present the subject in a systematic, orderly fashion, and in as few words as possible;" and from this point of view he has performed his task in a very creditable manner. But the book is too orderly and too concise to be pleasant reading, and in some respects it resembles more a dictionary of ready reference than a student's text-book on diseases of children.

Perhaps the best chapter is the one on the feeding of

infants. This has been dealt with at considerable length, but the subject and manner of treatment amply warrants the thirty pages given to it. The rest of the book is occupied with considering briefly the "etiology," "pathology," "symptoms," "diagnosis," and "treatment" of the more common ailments of childhood. Here the author claims no originality, and he freely acknowledges the use he has made of the larger text-books. But surely no standard work contains such a statement as we have on page 279, where the symptoms of pseudo-hypertrophic paralysis having just been described, there follows—"There are *three recognised types* of the disease—that involving the legs mainly; that involving the *shoulder-girdle*, or Erb's type; and that involving the *face and shoulder-girdle*, or the Landouzy-Déjérine type." This should evidently be that there are three *other* forms of muscular *dystrophy*, viz., those just mentioned. The section, too, on infantile cerebral palsies might, with advantage, be rewritten, and hemiplegia described as a condition quite apart from spasmodic paraplegia.

The book is well printed, and it is illustrated with five plates in colour and monochrome. It cannot but prove acceptable to many students of medicine.

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*Diseases of the Genito-Urinary System.* By EUGENE FULLER, M.D. New York: The Macmillan Company. 1900.

THIS volume treats of the surgical affections of the genito-urinary organs in a very systematic fashion. After introductory chapters on bacteriology and parasites, we proceed to the various affections of the external genitals, the urethra, the vesiculæ, prostate, bladder, ureter, and kidney. A special chapter on "The Sexual Function" is included. One feels fatigued occasionally with the detailed description of symptoms and etiology, and the differential diagnosis is sometimes a little drawn out.

Naturally, in such a book, the subject of gonorrhœa and its sequelæ is very fully gone into, while the author repeatedly draws attention to the many symptoms which may accompany an inflammatory condition in the vesiculæ seminales. In this connection the *technique* of rectal examination is given in detail.

The author quotes in several places, from published papers, his views on certain subjects dealt with in the text, but, in addition, he gives always a very impartial summing-up of the case, so far as other opinions are concerned. We notice this

specially in the remarks on the treatment of acute gonorrhœa, prostatic hypertrophy, and vesical calculus, where, without being dogmatic, he states his views clearly.

His doubts as to the usefulness of the cystoscope in hypertrophy of the prostate (p. 387) are worthy of attention, but we are hardly at one with him when, on p. 327, he prescribes recourse to coitus as part of the treatment of chronic vesiculitis.

The printing is excellent, and the illustrations are well executed, particularly Figs. 113 and 130, which are of great beauty.

The volume is a valuable addition to the surgeon's library, but we think that it might with advantage have been condensed in parts.

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*A Manual of Physiology, with Practical Exercises.* By G. W. STEWART, M.A., D.Sc., M.D. Fourth Edition. London: Baillière, Tindall & Cox. 1900.

IN our issue for June, 1896, we favourably reviewed the first edition of this book. That our favourable comments were justified is fully borne out by the rapid success of the volume, so that the fourth edition has been called for within five years. The second edition was a mere reprint, the third and fourth have been revised, and in parts rewritten. It is unnecessary for us to criticise the volume in detail, and we heartily wish the work the same success it has enjoyed in the past.

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*Edinburgh Hospital Reports.* Edited by G. LOVELL GULLAND, M.D., F.R.C.P. Ed., and JAMES HODSDON, M.D., F.R.C.S. Ed. Vol. VI. Edinburgh: Oliver & Boyd. 1900.

THIS sixth volume of the *Edinburgh Hospital Reports*, in its scope and in the matter of its contents, resembles closely the five preceding ones. It contains thirty-eight papers, most of them records of cases from the wards of the Edinburgh hospitals; and while possibly none of these is of outstanding merit, together they form a series of clinical records which cannot but be a valuable addition to the literature of our profession.

One of the most interesting articles of the series is that by Dr. Shennan on "Tuberculosis in Children." Taking the *post-mortem* records at the Children's Hospital for a period of sixteen years, it was found that of 855 cases, 355 were tuberculous. In 222 (67 per cent) of these the primary focus

seemed undoubtedly to be in the respiratory, and in 93 (28 per cent) in the alimentary tract. Of the former (those of respiratory origin), the bronchial glands were the primary focus in 64 per cent, and the lungs the primary focus in 30 per cent. In the case of abdominal tuberculosis the mesenteric glands were primarily affected in 12 cases, and the intestine in 45 cases. Cases are also quoted to show that the mesenteric glands may be affected without there being any apparent lesion in the intestine. The central nervous system was found involved in about 50 per cent of the cases.

Besides this paper by Dr. Shennan, there are others to be noted. That by the late Dr. Elder on "Huntington's Chorea" is of special interest; also Dr. Gibson's case of "Acute Heart Softening." We must also mention the paper by Drs. John Thomson and Drummond on "Nine Cases of Congenital Heart Disease." There are papers on surgical subjects—on aneurysm by Dr. Annandale, on the radical cure of hernia by Dr. M'Gillivray, and "Practical Observations in Surgery," by Professor Chiene. The special branches of surgery likewise have their share in the volume.

At the end of the book there are statistical tables supplied by the various hospitals, and this gathers together in convenient form the medical and surgical reports of these institutions.

The volume is well printed and well illustrated, and in this respect at least the editorial committee seem to have lost nothing by their change of publisher. We wish this sixth volume every success.

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*The Retrospect of Medicine: A Half-Yearly Journal.* By JAMES BRAITHWAITE, M.D. Lond., and E. F. TREVELYAN, M.D. Lond., B.Sc., M.R.C.P. January-June, 1900. London: Simpkin & Co., Limited.

As the title states, this work of 431 pages deals with short articles from the medical journals, and is a record of the current progress of medicine and its collateral sciences throughout the world.

The authors have clearly spared no efforts in gleaning and condensing a wide range of interesting and useful information.

The general arrangements of the book are methodical and complete. The clinical studies of disease and the indications for treatment will be regarded as valuable for reference, and we can cordially recommend the volume to the attention of our readers.



*The American Year-Book of Medicine and Surgery.* Edited by GEORGE M. GOULD. (Medicine.) London: Rebman, Limited. 1900.

THIS year the *American Year-Book* has been issued in two separate volumes, one being devoted to medicine and the other to surgery. The former, the one under review, deals with the following subjects, viz., general medicine, pediatrics, pathology, nervous and mental diseases, materia medica and therapeutics, physiology, legal medicine, preventive medicine, and physiological chemistry. Each of these departments has its own editor, and we have to congratulate each of these, as well as Dr. Gould, the general editor, for the admirable way in which the work of the undertaking has been carried out. The book is freely illustrated, well printed, and altogether amply fulfils the purpose for which it is published.

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*Transactions of the Chicago Pathological Society.* Volume III. Chicago: American Medical Association Press. 1900.

THIS volume contains a series of communications which had been brought before the Chicago Pathological Society during the sessions 1897-98 and 1898-99. The cases reported and the conditions described are more or less of a miscellaneous kind, but they are grouped together according to the system chiefly affected. There are many interesting papers in this series, but one we would specially draw attention to, that on "Splenic Pseudo-leukæmia." The case reported is striking. During life there was great diminution in the hæmoglobin and in the number of red corpuscles, while the proportion of leucocytes was quite normal. The spleen was greatly enlarged. At the *post-mortem* examination there was found but slight increase in size of the lymphatic glands, but there was considerable infiltration of lymphocytes into the liver and bone-marrow. Cultures were made from the blood during life, and from the other tissues after death, but with no result as regards finding a specific micro-organism.

Of the other papers in the volume we note that on the "Etiology of Scarlatina," by Mr. Class; on "Yellow Fever," by Edward Klebs; and on "Tuberculosis of the Cæcum," by T. R. Crowder; also, the *post-mortem* report of a "Case of Acromegaly," by Drs. Mitchell and Le Count.

The book is well printed and illustrated, and we have to congratulate the Chicago Pathological Society on its volume.

## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

### MEDICINE.

**Pernicious Anæmia: Study of 110 Cases, with 19 Autopsies** (Richard C. Cabot, *Amer. Journ. of Med. Sc.*, August, 1900).

*Sex.*—57 males, 53 females.

*Age.*—Above 40 except in 28 cases; 63 cases between 40 and 60; 19 over 60; 4 over 70, the oldest being 79; no typical case under 9 years of age.

*Other etiological data.*—The cases all came from Boston or its neighbourhood, and represented almost all social conditions. Seven patients were wives of physicians; 4 cases commenced in pregnancy, or immediately after parturition; 14 cases were perhaps related to the menopause; there was a history of tertian malaria in 4 cases; no relationship could be traced with syphilis or with intestinal parasites, or with cancer; hæmorrhage was a symptom in 37 cases (bowel, 15; nose, 13; gums, 12; stomach, 7; uterus, 3; lungs, 2; skin, 2; ear, 1; kidney, 2), but in no case preceded the other symptoms; 2 cases were complicated by nephritis; psychic factors were prominent in 3 cases.

*Symptoms.*—These are remarkably uniform, and are not necessarily in proportion to the impoverishment of the blood. Patients with 500,000 red corpuscles per c.m. often feel better than those with 1,500,000. Patients with less than 2,000,000 corpuscles per c.m. may feel almost or quite well. Exceptionally there may be a fair colour in the cheeks. The earliest and most frequent symptom is muscular weakness; next to this comes pallor, almost always with a yellow tint; next in order of frequency comes dyspnoea; and close after this, nausea or vomiting.

In 57 cases vomiting occurred without antecedent nausea. The gastric symptoms occur paroxysmally, with intervening periods of relatively good digestion. Anorexia was present in about two-thirds of the cases. In 1 case appetite was excessive.

Edema of the lower limbs was fairly constant in the late stages. Palpitation was much less complained of than dyspnoea.

Physical examination of the heart generally revealed only the functional murmurs to be expected in any anæmia, and these were generally less marked than they are in chlorosis. In 17 cases there was evidence of mitral regurgitation, and in 6 of these cases the heart was enlarged.

The bowels were disturbed in the majority of cases—paroxysmal diarrhoea in 43, constipation in 32 cases.

Vertigo in about half the cases; headache in 34; ringing in the ears in 30; evidence of spinal cord lesion in 31.

Defective vision mentioned in 20 cases. Retinal examination made in 36 cases; result—retinal hæmorrhage in 15, normal retina in 21 cases.

Enlargement of liver in 30 cases; of spleen, in 13. Emaciation in about half the cases. Fever in about two-thirds of the cases (from 100° upwards in 23 cases). Temperature constantly normal or subnormal in 26 cases.

Urine normal in 53, albuminous in 23, and with casts in addition in 21 cases. Urine dark in only 2 cases.

*Blood.*—There are periods in the course of most cases of pernicious anæmia when the diagnosis cannot be made by the blood examination alone. Moreover, the blood in this disease may vary much from day to day. At the first examination, the red corpuscles numbered from 500,000 to 1,000,000 per c.m. in 27 cases, below 2,000,000 in 106, and from 2,000,000 to 2,500,000 in 4 cases. The hæmoglobin was relatively high in 79, and not relatively high in 31 cases. Myelocytes present in 66 cases.

During a remission of the disease, when the red corpuscles increase, the colour index may remain high, or even become higher; but in most cases the hæmoglobin becomes relatively low, as in ordinary symptomatic anæmia, so that such cases, examined at such times, might be mistaken for chlorosis.

Coinciding with the increase of red corpuscles there is usually a still greater increase of leucocytes (mainly polymorphonuclear neutrophiles). The myelocytes meanwhile disappear. The megaloblasts become fewer, and are replaced for a time by normoblasts, which in their turn disappear also. The size of the red corpuscles becomes normal or subnormal. The abnormal staining reactions and the oval forms disappear. The count of red corpuscles generally ranges somewhere about 3,000,000 during most of the remission.

*Diagnosis.*—(1) Slow insidious onset, without obvious cause; (2) freedom from pain; (3) absence, in most cases, of emaciation; (4) frequent presence of spinal symptoms; (5) paroxysmal attacks of digestive disturbance; (6) tendency to great spontaneous improvement, which is followed by inevitable relapse; (7) reduction of red corpuscles to below 2,000,000 per c.m., without corresponding reduction in hæmoglobin; reduction in number of leucocytes, and especially polymorphonuclear neutrophiles; presence of many over-sized red corpuscles, some of them containing nuclei; tendency of red corpuscles to have oval shape and to stain abnormally.

*Course.*—The disease rarely goes on progressively from bad to worse. It comes upon the patient in successive waves or paroxysms.

*Prognosis.*—Of the 70 cases followed from start to finish, the greater number lasted less than two years, the longest being five years. There was no instance of genuine recovery.

*Treatment.*—Most of the cases received Fowler's solution in gradually increasing doses over long periods. Less frequently bone-marrow and oxygen were employed. "Personally I do not believe that any of these therapeutic agents have any effect on the course of the disease." Their use may be followed by great improvement, but it cannot prevent relapse. On the other hand, sudden improvement may occur, and the blood-count may become normal when no medicine is given. Such improvement sometimes follows or accompanies an attack of diarrhœa, so that benefit might perhaps accrue from the use of purgatives.—T. K. M.

## SURGERY.

By G. H. EDINGTON, M.D.

**Cure of Depressed (Vicieuse) Cicatrix in the Cheek, by Freeing it and Inserting Graft of Adipose Tissue.**—A young girl, aged 12 years, was shown to the Société de Chirurgie de Lyon by Nové-Jossierand in May, 1900. He had treated a cicatrix, adherent over the malar bone, by the following operation:—Dissection of the cicatricial tissue and transplantation into the wound of a piece of fat taken from the thigh of the patient. Wire sutures were used, and the result of the operation was very satisfactory.—(Report of Meeting of the Society in *Rev. de Chir.*, July, 1900, p. 115.)

**Bulky Sebaceous Adenoma of the Face.**—A man, aged 56, was admitted in November, 1899, to l'Hôpital Saint Sauveur de Lille, with a bulky tumour in the left parotid region. Eight years ago a little pea-like nodule was noticed in front of the ear. Two years ago it began to enlarge, and had continued to do so till admission. When seen at the hospital it was larger than the fist; its base was broad, occupying the whole masseteric region and extending slightly below the lower margin of the mandible. The surface was sloughy, and greyish black in places, and in others showed reddish

granulations. Its consistence resembled that of muscle. Mobility was manifest, but one could not be sure of it being free on the parts beneath. Handling evoked only slight pain. The patient was emaciated and pale, and enfeebled by the abundant discharge from the ulcerated portion of the growth. The granulations also bled easily.

Complete ablation of the mass was performed in view of its possible malignancy. The bottom of the wound was formed by a greyish-yellow thick fibrous tissue, comparable to a chronically inflamed bursa. This was cut away, the masseteric fascia being removed with it and so damaging the facial nerve. The borders of the wound were drawn together as much as possible, and the parts healed slowly but satisfactorily, leaving the man with a facial palsy.

The duct of Steno was not seen at the operation, but, from the subsequent course of the case, was apparently uninjured.

Microscopical examination showed that the mass was not malignant, but a sebaceous adenoma. The absence of peripheral infiltration and the absolute emptiness of the lymphatic vessels were the two main facts observed. The authors regret the removal of the fibrous basal membrane, the leaving of which unimpaired would have spared the facial nerve, if not entirely, at least in some of its branches.—(Curtis and Lambret, *Rev. de Chir.*, August, 1900.)

**Compression of the Pedicle of a Movable Kidney by a Distended Gall-bladder; Nephropexy: Cholecystostomy; Cure.**—A married woman, aged 38, entered the Hôpital de Sévres in December, 1899, suffering from severe pains in the right flank. These were aggravated by excessive fatigue, and she was confined to bed for eight days. The condition becoming worse she went into hospital. On admission she was feverish, with irregular pulse, but without a trace of jaundice. There was constant vomiting; the urine was scanty, but was clear and non-albuminous. The pain was spasmodic, and was seated in the hypochondrium and flank, but also shot down the course of the ureter and up towards the right shoulder. The abdomen was distended and tender, so as to make examination difficult. In the gall-bladder region one found a hard irregular swelling, not very deeply situated; there was dulness on percussion continuous with the note over the liver; below the swelling extended two fingers' breadth below the level of the navel, internally it reached the middle line, while externally it was ill-defined. The swelling was pear-shaped, and appeared to move with respiration, but as the latter was rapid and laboured, this movement was not well seen. The margin of the liver was slightly lower than normal.

Behind lay a second mass, passing more outward and downward. Bimanually it had the shape of an enlarged kidney. When ballottement was practised, both masses were displaced simultaneously, giving the impression as of a single bilobed tumour.

The symptoms pointed to a renal distension with an element of sepsis. Lumbar incision showed the kidney to be almost doubled in size and of abnormally dark colour. The hand introduced on to the anterior surface discovered the mass in front to be the gall-bladder, distended with fluid and containing calculi, and moulding itself on the kidney and hilum.

Although there were no peritoneal adhesions, the fingers passed between the bladder and kidney only with difficulty. The kidney was disengaged and fixed to the last rib. It was considered unwise to open the bladder from behind, as its contents were probably septic. The lumbar incision was therefore closed, with a drainage-tube inserted behind the bladder. The flow of urine increased, the temperature fell in the evening to 38° C., and the pain ceased. The kidney rapidly regained its normal size, and the drain and sutures were removed at the end of the seventh day. At this time cholecystostomy was performed, and purulent fluid was removed from the bladder along with several calculi. The fistula subsequently closed, and the patient was dismissed well.

The bile gave a pure culture of bacterium coli.

The author considers that we have here to deal with a displaced kidney becoming hydronephrotic from pressure on its *pedicle* by the enlarged gall-bladder. Pressure on the vein would account for the colour of the organ, and for the *gradual* diminution in size after the nephropexy.—(F. Raymond, *Rev. de Chir.*, June, 1900.)

**Abdominal Hysterectomy in the Treatment of Cysts and of Solid Tumours of the Ovary.**—The author's conclusions are as follows:—Total abdominal castration for neoplasms of the adnexa is legitimate. The mortality of ovariectomy is not thereby increased.

The proceeding offers some technical advantages—viz., separating extensive pelvic adhesions, facility in forming a pedicle, and principally the possibility of autoplasmic restoration of the pelvic floor. There is also a resulting security from post-operative accidents, e.g., intestinal occlusion.

In certain cases, hysterectomy gives the only surety of a radical cure.

The operation is *indicated* (1) in cysts and ovarian tumours complicated by uterine, peri-uterine, and tubal inflammatory lesions; (2) where the ovarian condition is complicated by neoplastic degeneration of the uterus, whether independent of the ovarian lesion or resulting from secondary extension from the latter; (3) in bilateral cysts or tumours where pediculisation or hæmostasis is difficult on account of thickness of pedicle, its friability, or its evolution in the broad ligament.

It is *contra-indicated* (1) in unilateral cyst in a young woman; (2) in bilateral case with healthy uterus and easy pediculisation; (3) when one can obtain satisfactory pediculisation by a simpler procedure.—(Quénee and Longuet, *Rev. de Chir.*, July, 1900.)

**Dermoid of the Penis.**—A child, aged 5 years, had on the under surface of the penis a sausage-shaped cystic tumour, measuring 5 cm. long by  $\frac{3}{4}$  to 1 cm. thick. It had never given him any trouble and had been observed since the age of 9 months. It was easily excised from the subcutaneous tissue in which it lay. It was possessed of sebaceous contents, with epidermic cells, detritus, and cholesterol. The wall of the cyst was 1 to  $1\frac{1}{2}$  mm. thick, and showed a fibrous capsule, well supplied with blood-vessels, and on which was placed a layer of cutis surmounted by a layer of basal cylindrical cells, polygonal cells, and, finally, a stratum corneum. Papillary formation was present, differentiating the cyst from the merely atheromatous variety. The author regards its origin as connected with an error of development at the time of the closure of the penile raphe ("fissural" dermoid.)

He refers to three similar cases already reported, and also to the other cystic tumours of the skin of the male genitals.—(Gerulanos, *Centralbl. für Chir.*, 25th August, 1900.)

**Interstitial Cells in the Ectopic Testicle of the Adult.**—In two cases, one of 37 and the other 22 years, left inguinal hernia was associated with undescended testicle. There was no complaint of pain in the testicle. Castration was performed at the time of the radical operation for the hernia, and histological examination of the organ was made in each case. Two kinds of lesions were found:—(a) atrophy of the seminiferous tubes, and no spermatogenesis; (b) remarkable numerical increase of interstitial cells.

The authors draw particular attention to the changes in the interstitial cells, and raise the question as to a possible relation between their great abundance and the fact that in ectopic testicles the commonest neoplasms are of sarcomatous nature, while in the normally situated testicle tumours are for the most part of the epithelial type.

The practical conclusion is to remove such testicles after puberty, because spermatogenetic function is gone, and also because of liability for malignant tumours to develop in the organ.—(Cunéo and Lecène, *Rev. de Chir.*, July, 1900.)

**Double Abdominal Cryptorchism.**—Championnière showed a case of the above at the June sitting of the Académie de Médecine.

He had more than twelve years ago operated on a child, aged 11. The patient had double inguinal hernia, with both testicles retained entirely within the abdomen. The penis presented an insignificant development. In two operations, Championnière had performed radical cure of each hernia by his own method, brought the testicles out of the abdomen, and, after dissection, lowered and fixed them at the level of the scrotum. Immediately after, the subject developed extraordinarily. The herniæ have remained cured. To-day he is vigorous, well-developed, and the genital organs are to all appearance possessed of normal functional activity. The testicles are situated close to the root of the penis. The right is voluminous and possesses testicular sensation. The left, small, and drawn up in the groin, was painful when he was at work, and Championnière had accordingly removed it.

Microscopical examination showed it to be atrophied and with complete absence of spermatogenesis, although the character of the gland had been preserved.

Championnière thinks this case is *unique*.

The difficulty of bringing down the testicle, in any form of cryptorchism, depends on the fibrous bands which retain the organ. The success of operative measures does not depend on the method of fixation in the scrotum but on the dissection of these bands, provided, of course, that the vas deferens be of sufficient length. If the dissection cannot be carried out, then one must perform castration. The preservation of even a mediocre testicle is of prime importance, not only on account of genital reflexes, but of the influence exerted on the moral development and general health of the patient.—(Reported in *Rev. de Chir.*, July, 1900, p. 124.)

## DISEASES OF THE SKIN.

By W. R. JACK, M.D., B.Sc.

**Parasitic Origin of Eczema.**—In the September number of the *British Journal of Dermatology* Macleod contributes the reports and the discussion upon this subject at the fourth International Congress of Dermatology, held in Paris. The reporters were Unna, Jadassohn, Galloway, Brocq, and Veillon. They arrived at very varying conclusions on the subject, Unna being the most definite in his advocacy of the parasitic theory. Macleod sums up the views presented as follows:—

"1. There is no consensus of opinion among dermatologists as to the dermatoses which ought to be included under the term eczema.

"2. The majority of dermatologists do not regard eczema as a parasitic disease due to a specific organism, nor as a parasitic disease the various forms of which correspond to different organisms.

"3. The morococcus of Unna is almost universally regarded as an ordinary staphylococcus, with a slight peculiarity in its growth and grouping, and not as a perfectly distinct micro-organism.

"4. Several experimenters regard the early eczema-vesicle as amicrobic (Jadassohn, Veillon, Sabouraud, and others), while others find in the fresh vesicles various forms of cocci.

"5. Many observers are convinced of a local predisposition to eczema in the seborrhœic state, and a general predisposition in the circulation of various toxins in the skin, from the improper assimilation of food, and of other toxin-producing pathological conditions.

"6. Most observers are agreed that in the later stages of eczema staphylococci and streptococci play an important part in the evolution of the lesions."

Galloway's report is given in full in the same number of the *Journal*, and is in substantial agreement with the conclusions summarised.

**Multiple Carcinomata of the Skin.**—Allworthy records this case from the clinical point of view, and Pernet supplies the microscopical account (*British Journal of Dermatology* for October):—A man of 55, first seen in July, 1900, had suffered for eighteen months from recurrent tumours on the right buttock, some disappearing at intervals, while others took their place. Some of them softened and burst, and a foetid blood-stained discharge came from them. These he sometimes cut off with his penknife. There was very little pain, but his strength was failing. He was emaciated, and had a cachectic appearance. There were about thirty tumours, varying from the size of a bean to that of a tomato, the smaller ones being dull red or livid, the larger pale yellowish. All were insensitve, some firm, others softened in the centre, with a thin ichorous discharge. One or two growths were removed, and the blood-supply was found to be copious. When any one of them disappeared, either under the knife or from degeneration, it was succeeded by new nodules close to the old cicatrices. Some grew slowly and remained firm, others grew and softened rapidly. The parts were kept clean, and first sulphocarbolate of soda, and afterwards iodide of potassium, was given internally. The general health was much improved, and the patient, though anæmic, has not lost strength in the past three months. Histologically the tumours proved to be multiple alveolar carcinomata of the skin, possibly originating from the sweat apparatus.

**Epidermolysis Bullosa.**—Russell (*Journal of Cutaneous and Genito-Urinary Diseases* for September) reports the following case:—A boy of 8 was seen by him, in June of this year, suffering from a bullous eruption which had been present probably for six years; otherwise he was in perfect health. He had been almost constantly troubled with recurring large or small bullæ, usually over the joints or where the skin was stretched over the bones. They generally arose in response to a slight blow or bruise, although some seemed to have done so spontaneously. They were frequent on the knuckles, but also on the wrists, ankles, and knees, where they were sometimes 3 inches in diameter. They were preceded by slight hyperæmia. The bullæ were extremely irregular in shape, and were produced by very slight violence, such as a pull on the ear. There was no organic nervous disease, but well-marked hyperidrosis was also present, as is usual in this ailment.

### *Books, Pamphlets, &c., Received.*

**Cancer of the Uterus: Its Pathology, Symptomatology, Diagnosis, and Treatment; also, the Pathology of the Diseases of the Endometrium,** by Thomas Stephen Cullen, M.B. With 11 Lithographic Plates and over 300 Coloured and Black Illustrations in the text. London: Henry Kimpton. 1900. (31s. 6d. net.)

**Angioma, and Other Papers,** by John Duncan, M.A., LL.D. Edited by James Hodsdon, F.R.C.S. Ed.; with Memoir by John. Cheine. With Portrait. Edinburgh: Oliver & Boyd. 1900. (5s. net.)

- A Text-Book of Practical Therapeutics**, by Hobart Amory Hare, M.D., B.Sc. Eighth Edition, Enlarged, Thoroughly Revised, and Largely Rewritten. Illustrated with 37 Engravings and 3 Coloured Plates. London: Henry Kimpton. 1900. (21s. net).
- A Text-Book of Practical Medicine**, by William Gilman Thomson, M.D. Illustrated by 79 Engravings. London: Henry Kimpton. 1900. (21s. net.)
- Illustrated Lectures on Nursing and Hygiene**, by R. Lawton Roberts, M.D., D.P.H. Third Edition. With Illustrations. London: H. K. Lewis. 1900. (2s. 6d.)
- Malaria**, according to the New Researches, by Professor Angelo Celli; Translated by John Joseph Eyre, M.R.C.P., D.P.H.; with an Introduction by Dr. Patrick Manson. With Maps and Illustrations. London: Longmans, Green & Co. 1900. (10s. 6d.)
- Diseases of the Throat, Nose, and Ear: A Clinical Manual for Students and Practitioners**, by P. M'Bride, M.D., F.R.C.P. Ed. Third Edition, Revised and partly Rewritten. With Coloured Illustrations from Original Drawings. Edinburgh: Young J. Pentland. 1900.
- Notes on Physiology**, by Henry Ashby, M.D., F.R.C.P. Seventh Edition. London: Longmans, Green & Co. 1900. (5s.)
- Essentials of Surgery**, by Edward Martin, A.M., M.D. Seventh Edition, Revised and Enlarged, with an Appendix. London: Henry Kimpton. 1900.
- The Medical School Calendar and Guide to Students for Scotland**, 1900-1901. Edinburgh: E. & S. Livingstone. (2s.)
- A Manual of Surgery, for Students and Practitioners**, by William Rose, M.B., B.S. Lond., F.R.C.S., and Albert Carless, M.S. Lond., F.R.C.S. Third Edition. London: Baillière, Tindall & Cox. 1900. (21s. net.)
- A Manual of Physiology, with Practical Exercises**, by G. N. Stewart, M.A., D.Sc., M.D. Edin., D.P.H. Camb. With 336 Illustrations and 5 Coloured Plates. Fourth Edition. London: Baillière, Tindall & Cox. 1900. (15s. net.)
- Thomas Sydenham (Masters of Medicine Series)**, by Joseph Frank Payne, M.D. London: T. Fisher Unwin. 1899. (3s. 6d.)
- Herman Ludwig Ferdinand von Helmholtz (Masters of Medicine Series)**, by John Gray M'Kendrick, M.D. London: T. Fisher Unwin. 1899. (3s. 6d.)
- The Temples and Ritual of Asklepios at Epidauros and Athens: Two Lectures delivered at the Royal Institution of Great Britain**, by Richard Caton, M.D. With 34 Illustrations. Second Edition. London: C. J. Clay & Sons. 1900. (3s. net.)



**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FOUR WEEKS ENDING 20TH OCTOBER, 1900.**

	WEEK ENDING			
	Sept. 29.	Oct. 6.	Oct. 13.	Oct. 20.
Mean temperature, . . .	53·5°	48·6°	50·4°	45·7°
Mean range of temperature between day and night, . .	12·9°	14·1°	11·8°	12·5°
Number of days on which rain fell, . . . . .	5	6	6	2
Amount of rainfall, . ins.	2·06	1·54	1·48	0·74
Deaths registered, . . .	268	285	272	270
Death-rates, . . . . .	18·7	19·9	19·0	18·9
Zymotic death-rates, . .	3·2	4·1	3·1	2·4
Pulmonary death-rates, .	4·2	4·9	5·3	7·1
<b>DEATHS—</b>				
Under 1 year, . . . . .	77	89	75	82
60 years and upwards, .	34	39	47	36
<b>DEATHS FROM—</b>				
Plague, . . . . .	3	1	1	...
Small-pox, . . . . .	...	1	2	2
Measles, . . . . .	3	6	1	1
Scarlet fever, . . . . .	6	5	5	3
Diphtheria, . . . . .	4	2	4	5
Whooping-cough, . . .	25	7	10	7
Fever, . . . . .	4	10	4	4
Diarrhoea, . . . . .	21	26	17	12
Croup and laryngitis, .	1	...	...	...
Bronchitis, pneumonia, and pleurisy, . . . . .	47	47	36	71
<b>CASES REPORTED—</b>				
Plague, . . . . .	...	...	...	...
Small-pox, . . . . .	6	7	5	16
Diphtheria and membranous croup, . . . . .	15	11	14	15
Erysipelas, . . . . .	25	18	28	34
Scarlet fever, . . . . .	92	97	146	125
Typhus fever, . . . . .	...	...	2	1
Enteric fever, . . . . .	22	18	29	28
Continued fever, . . .	...	...	1	...
Puerperal fever, . . .	...	1	1	2
Measles,* . . . . .	20	16	20	23

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 25th October, 1900.

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ORIGINAL ARTICLES.

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THE EVOLUTION OF THE MASTOID OPERATION.<sup>1</sup>

By JAMES KERR LOVE, M.D.

I VENTURE to bring the subject of the mastoid operation before you because, during the past few years, the method of its performance has undergone a kind of evolution, which, I think, is approaching the stages of finality.

Surgically considered, the middle ear, with its connections in the mastoid process, form an extremely complicated set of cavities, which, when they become the seat of suppuration, drain very imperfectly either into the throat, towards which the only open passage exists, or through the membrana tympani into the external auditory canal, the usual direction in which rupture occurs.

For about one hundred years after the earlier operations for mastoiditis by Petit and Jasser, not much progress appears to have been made in mastoid surgery. All that was attempted was the simple evacuation of the contents of the inflamed mastoid, and the results were so unsatisfactory that for long periods the operation fell into disrepute altogether. It is to the genius of Schwartze, of Halle, that the present creditable position of the operation amongst surgeons is due. All of you

<sup>1</sup> Read at a meeting of the Glasgow Pathological and Clinical Society held on 12th November, 1900.

are familiar with Schwartze's operation, the principle of which is that all the bony recesses in the tympano-mastoid area be laid into one smooth-walled cavity. For this purpose the posterior wall of the external auditory canal must be removed. Through drainage is thus got from the mastoid wound to the middle ear, and very often complete and final healing results. I am not discussing the cerebral complications of mastoid disease, but it should be stated that even where final healing does not take place, the risk of such complications following is greatly reduced by Schwartze's operation. But in many cases the healing is not final, and it is to the reasons for this want of uniformity in the entirely successful result that I wish here to draw attention. I would like to call the operation above outlined the double-channel operation, in contrast to the operation I am about to describe, and which I have named the single-channel operation. The weakness of the first operation is its double channel, the two branches of which (the external auditory canal and the mastoid wound) meet at their inner ends. It is at or near this place of meeting that the hitch is apt to occur which necessitates a second operation on the mastoid, after an interval of months or years. This is well illustrated by a case I saw lately. A surgeon did the radical Schwartze operation for a subacute mastoiditis which followed and developed from a twenty year old middle ear suppuration. In its immediate object the operation succeeded. After more than a year, during which the size of the mastoid drain was very gradually lessened till it consisted only of a single strand of catgut, it was determined to allow the posterior wound to close. The discharge from the middle did not cease, and within three months the tympano-mastoid recess was filled with stinking pus which could not be drained without a second operation.

Now, the cause of failure like this is the presence between the two branches of the healing sinus, or between the two channels as I have named them, of a partition—the posterior cutaneo-cartilaginous wall of the external auditory canal. The slitting of this at the time the mastoid operation is performed allows of the immediate closure of the skin wound behind, and the performance of all after-treatment by a single channel—the slit external auditory canal. If this after-treatment be carefully conducted, if by careful dressing and packing the wound be made to heal from its deep parts towards the surface, free access to the deepest parts of the bony recesses will always be got, and final healing without a second mastoid operation secured in every case.

CASE I.—A. R. This case illustrates the first step in the evolution of the mastoid operation—simple opening of the mastoid process.

On 9th July of this year I was called to see her by Drs. Whish and King, of Pollokshaws, under whose care she was then suffering from scarlet fever in the Darnley Fever Hospital. A pneumonia had developed, and was at that time disappearing, but the middle ear suppurated subsequent to a throat affection, and on the date I mention (9th July) there was an acute mastoiditis, and operation was urgently needed. The mastoid process was perforated, pus found in its cells, and with a sharp spoon its contents evacuated; the external auditory canal and the mastoid were packed with iodoform gauze, and healing took place in about two months.

CASE II.—K. S. This is another scarlet fever case, but the disease occurred about a dozen years ago, and there was no attempt at operative interference at the time. When I saw him, nearly a year ago, the middle ear was filled with granulation masses, the discharge of pus was great, and the probe struck the bare internal wall of the tympanum, but there were no urgent symptoms. All the membrane was gone. For several months I tried to stop the discharge by ordinary means, but was unsuccessful, and about Easter of this year it was decided to do the radical Schwartz operation. Healing took place within three months, but as the patient had to continue his treatment far from Glasgow, instructions were given that the mastoid wound was not to be permitted to close. Now a strip of gauze can be drawn from the mastoid wound through the external auditory canal, all suppuration has ceased, and the case might be considered at an end.

The objections to this form of operation are that an unsightly pit has been left on the mastoid process, which could only be closed by a plastic operation; and that if in future any disease-products collect in the antrum they cannot be removed without opening the wound.

CASE III.—W. B. This case is an exact parallel to the last in that it began in scarlet fever, and continued for a long number of years. Both ears were affected. About the end of May of this year it was determined to operate on one, both having resisted all treatment *via* the external auditory canal; and, following a practice which I, a little before this, began at the Royal Infirmary—of grafting the middle ear by Mr. Ballance's method—this latter operation was performed. The

large single graft used lived, and the case has done well, although healing is only just complete.

CASE IV.—This and the following case are from those under my care in the Royal Infirmary. They show the Schwartze operation *plus* slitting the postero-cartilaginous wall of the external auditory canal, but without the use of grafts.

J. G., admitted to Ward 12 on 15th September, 1900. The discharge from the right ear had lasted for three years, and began then with measles. All the membrane was gone, and the probe struck bare bone. Pus and granulations were removed from the mastoid antrum, the radical operation completed, and the wound stitched up at once. The mastoid wound healed rapidly, all stitches being taken out in ten days, *and now, seven weeks after the operation of 20th September, all discharge has ceased.*

CASE V.—Wm. M'C. This case, like the last, originated in measles fourteen years ago. The antrum was full of granulations. The same operation was done, all the hard and soft parts being made to communicate with one channel—the external auditory canal—through which access could be got to the remotest recess at any time till healing is complete. This event has not taken place yet, only a month having elapsed since the operation, and I have introduced the case chiefly to show the early healing of the mastoid wound, from which the stitches were removed on the tenth day, and of which, as you see, there is practically no mark.

The advantages which I claim for this method of treatment are these:—

1. The mastoid wound heals quickly, and there is left no pit or even visible cicatrix.
2. All dressings can be removed from the side of the head in about a fortnight, and the patient may thereafter resume work.
3. Complete control is maintained over the conduct of the healing of the deep parts, ultimate cessation of discharge is ensured, and the risk of ever afterwards having to reopen the mastoid wound is greatly diminished or entirely removed.
4. Skin-grafting by Mr. Ballance's method, while giving good results, is unnecessary in ordinary cases, as healing will take place rapidly enough without it if the canal be carefully packed every two or three days, and the granulations which fill up the groove treated on ordinary principles.

## CASE OF ANÆMIA IN A YOUNG GIRL, ASSOCIATED WITH ENLARGEMENT OF THE SPLEEN.<sup>1</sup>

By R. BARCLAY NESS, M.A., M.B., F.F.P.S.G.,

Professor of Materia Medica and Therapeutics, Anderson's College Medical School; Dispensary Physician to the Western Infirmary and to Royal Hospital for Sick Children, Glasgow.

J. T., a young girl, aged 16 years, was admitted into the Western Infirmary, under the care of Sir William T. Gairdner, on 1st February, 1900, affected with well-marked anæmia, and complaining of general weakness, associated with headaches, and occasionally with pain in the back and sides, chiefly the left.

When she left the hospital on 26th May there was little real change, beyond a slight improvement in her general condition, associated with an increase in weight. Since the middle of September she has been under my charge as an out-door patient at the Dispensary of the Western Infirmary.

It will serve my purpose best if, at the outset, I show you the patient, and demonstrate the chief clinical facts. Thereafter I will give you what details I have regarding the history, progress of the case, the examination of the blood, &c., and will discuss the probable nature of the condition.

In the first place, it will be noticed that the girl is fairly well nourished, though she is by no means well developed for her age. Her weight is at present only about 5 stones, showing, however, a gain of 10 lb. from the time she was first admitted to the hospital.

The most apparent feature of her condition is the degree of anæmia. This is very evident in the mucous membrane of the mouth, while in the skin it is associated with a peculiar yellowish appearance, difficult to describe, but likened by some to a faded box-leaf, and technically called by others *likenosis* or *splenic cachexia*, on account of the association of this cachectic tint of the skin with enlargement of the spleen.

This tendency to a yellowish colouration is still more evident in the eyes, where the sclerotic is so yellow as to suggest jaundice; but there never has been detected in the urine any trace of bile, nor have there been other symptoms to suggest this condition.

Associated with the anæmia we have the "venous hum"

<sup>1</sup> Read before a meeting of the Glasgow Medico-Chirurgical Society held on 19th October, 1900.

well marked on both sides of the neck, and a distinct ventricular systolic murmur heard widely over the precordial area but more distinct over the pulmonic cartilage. There is nothing abnormal in the area of cardiac dulness. The pulse-rate on an average is about 95 per minute, respiration about 30 per minute. The lungs are normal.

The next important fact is the condition of the spleen. This is found very much enlarged, extending downwards from the left hypochondrium to within half an inch of the umbilicus. The tumour thus formed is smooth and firm, and the notch is readily made out. The patient often complains of pain in this region, but there is no tenderness. With regard to the liver, it is more difficult to speak with the same degree of certainty. By percussion there is no dulness that can be detected below the level of the costal arch, but on deep palpation, better felt when she was in the hospital than now, something solid can be detected immediately under the right hypochondrium—possibly it is of hepatic origin.

Nothing further has been detected of an abnormal character in the abdomen.

Passing now to the lymphatic system, it is to be observed that we have no enlargement of the glands of any consequence. While in the hospital it was noted that the cervical glands were slightly palpable as hard movable masses, but the individual glands were not distinctly enlarged. The inguinal groups were just detectable, but not those in the axillæ. There has been no further involvement since that time.

With regard to the examination of the blood, the following facts were made out:—On admission to the hospital in February the hæmoglobin was found to be 40 per cent, the red blood corpuscles 2,300,000 in the cubic millimetre. About the same time Professor Muir gave the following report on blood films, taken on 7th February:—

“The red corpuscles show considerable variation in size and shape, and there are some irregular forms (poikilocytes) present. There are also a few nucleated red corpuscles.

Leucocytes . . . = 10,000 per cubic millimetre.

Polymorphonuclear leucocytes, = 77 per cent.

Lymphocytes, . . . = 18 „

Large mononuclear, . . . = 3 „

Eosinophiles, . . . = 2 „

This condition indicates a slight relative leucocytosis. There are also present a few *myelocytes*.

“The presence of nucleated red corpuscles and myelocytes

with this degree of anæmia is somewhat uncommon, and points, I think, to a graver condition than is indicated by the number of the red corpuscles. But the course of the case will show whether this is so."

At a later date (16th May) Professor Muir again reported on the condition of the blood.

Red corpuscles, . . . = 2,590,000 per cubic millimetre.

"They vary considerably in size, but few irregular forms are present. A few *nucleated red corpuscles* are also present.

Hæmoglobin, . . . = 38 per cent.

Leucocytes, . . . = 6,600 per cubic millimetre.

Polymorphonuclear forms, . . . = 60 per cent.

Lymphocytes, . . . = 36 "

Hyaline (large mononuclear), . . . = 4 "

Eosinophiles, . . . very few.

Myelocytes (marrow cells), . . . one or two.

Blood plates, - . . . scanty.

The condition is closely similar to that of 7th February, the date of first report."

On 20th September I examined the blood myself, with the following result:—

Hæmoglobin, . . . = 55 per cent.

Red blood corpuscles, . . . = 3,400,000 per cubic millimetre.

Leucocytes, . . . = 15,233 " "

This showed an improvement in respect both to the proportion of the hæmoglobin and the red blood corpuscles; but the leucocytosis was much more marked, chiefly in respect to the polymorphonuclear and lymphocyte forms, while the eosinophile cells were also slightly increased. An occasional nucleated red corpuscle was seen, but no myelocytes. I submitted my preparations to Professor Muir, and he detected a distinct difference in the diminution or absence of these cells which had previously suggested a grave condition.

I again examined the blood on 16th October, with the following result:—

Hæmoglobin, . . . = 45 per cent.

Red blood corpuscles, . . . = 3,360,000 per cubic millimetre.

Leucocytes, . . . = 13,200 " "

This estimate practically agrees with the last, except for the fact that the hæmoglobin is lower and is more in accordance with the earlier reports. The estimation of the relative



proportion of the various ordinary forms of leucocytes was essentially the same as indicated by Professor Muir.

The other facts of the case, which may be stated just now, are these:—There has been no evidence or history of hæmorrhages. This is true also of the retina, as frequent ophthalmoscopic examination has shown. There has been no gastro-intestinal disturbance nor complaint beyond weakness, slight breathlessness, frontal headache, and pain in the region of the spleen, of which she has never given a very accurate description. With regard to the temperature, it was practically normal the whole time she was in the hospital, occasionally it approached near 100° F. and only on two occasions (the evenings of 3rd and 4th February) did it rise above this, and then only to 100·2° F. and 100·4° F.

While the patient was in hospital the urine showed no abnormality; lately, however, there has been detected a trace of albumen, but unassociated with tube-casts. The tests for blood, sugar, and bile were negative.

On one occasion (11th October) it presented a peculiar reddish colour, probably due to uroerythrin, and a copious deposit of urates and uric acid crystals.

These, gentlemen, are the important facts of the case. Now I will lay before you what has been obtained regarding the history.

The father is a mason, and seems to be affected with some chronic pulmonary condition. No detail as to his history was obtainable. The mother married at 24, and has had nine pregnancies.

The patient was the second child; the third, fifth, and sixth pregnancies resulted in miscarriages, the seventh in a birth, premature by three weeks.

The above suggests a specific element, but no indications of congenital syphilis in any of the children could be elicited from the mother. It is worth noting that whatever was the cause of the "miscarriages," they occurred after the birth of the patient. Too much stress, however, cannot be put upon such a fact as weighing against the possibility of a specific taint being present.

There is, at the present time, no physical evidence of the child having been the subject of congenital syphilis, and the same is true of rickets.

There is nothing noteworthy in the history of the patient as an infant; but between the ages of 3 and 7 it had measles, whooping-cough, and scarlet fever, and was very ill during

each of these illnesses. It was a month or two after the scarlet fever that the mother noticed the child becoming extremely pale and very weakly, and on this account she was not allowed to attend school for about six months.

Later, when the child was 8 years old, Dr. Ritchie (Pollokshaws) was called in, who, according to the mother, pronounced the child "bloodless." She was, however, in a short time allowed to return to school, but little improvement took place in her condition.

When 9 years of age the child had a very serious illness, regarding which Sir William T. Gairdner obtained the following information from Dr. Ritchie (Pollokshaws):—

"About six years ago I was called in, and found the patient in a very distressed condition, with rapid breathing, tender abdomen, high temperature, highly anæmic, and with a pulse so rapid and compressible that I feared she was in a moribund condition.

"Examination showed a very much enlarged and painful spleen, but there was so much œdema that I could not make out anything else.

"Of course, I gave an unfavourable prognosis, but, to my astonishment, after treating her for a few days with potassium acetate and a dose of pulv. jalap. co. she got much easier from the disappearance of the œdema.

"I could then feel that the spleen was very much enlarged, but not so painful. After a few days the parents intimated that they would send if she got worse. . . . To my surprise she was out again before long, and, on examining her, when visiting a neighbour, I found her spleen almost natural; but she was very anæmic. I have not seen her for a long time."

At the onset of this illness, the mother states that the child to her seemed almost unconscious. For five days she never spoke to anyone. The pain in her side appears to have been, from the mother's statement, a distinct feature of her illness. Some months elapsed before she gathered any strength, but she never regained it to any great extent. She has remained weakly and anæmic ever since, and has never been able to attend school for any length of time. Before admission to hospital she had been steadily falling off, both in strength and weight, certainly for some months, probably for a much longer period, but the pallor does not appear to have appreciably increased. Her appetite has been very variable, sometimes fairly good, but more commonly very poor. There has been no sickness nor vomiting, but headaches frequently trouble her.

*Diagnosis.*—In trying to form a proper diagnosis in this case, we must, I think, recognise the fact that it began in early childhood, and, I think, probably before the time of the illness during which Dr. Ritchie was in attendance. The mother, I think, has recognised that her child from very early age has been peculiarly pale. This became more evident after the scarlet fever, and culminated in the rather obscure but severe illness just referred to.

Now, in considering the diseases which may be associated with marked anæmia and enlargement of the spleen, it should not be forgotten that in children rickets and syphilis are distinct causes, no doubt at a much earlier age. I refer to this, not so much in regard to rickets, because there is no evidence of past rickets, but chiefly on account of the fact that there is in the mother's history after marriage the suggestion that specific disease might be a factor in the production of the condition.

The other diseases in which we may have anæmia with enlargement of the spleen are these—Leucocythæmia, Hodgkin's disease, pernicious anæmia, splenic anæmia.

*Leucocythæmia.*—In the two forms of this disease—(a) spleno-medullary; (b) lymphatic—we have anæmia and enlargement of the spleen, but it is only in the lymphatic form that we have usually the lymphatic glands enlarged. We could not, therefore, exclude leucocythæmia in this case without an examination of the blood. In this connection it should be remembered that in some cases the actual number of leucocytes may not exceed very much that of normal blood, but when this is the case we can always depend upon the character of the leucocytes to indicate the condition. In the spleno-medullary form the chief fact is the presence of a large number of marrow-cells (myelocytes), while in the lymphatic form there is a distinct relative excess of lymphocytes.

Now the blood in the present case in no way suggests leucocythæmia of either form. We have a slight increase of the leucocytes (leucocytosis), but we have really no great variation in the due proportion of the several varieties to one another. The presence of the nucleated red corpuscles and myelocytes were few in number, and have a certain grave significance, but none in suggesting leucocythæmia.

*Hodgkin's disease.*—The chief fact in the diagnosis of this

condition is the enlargement of the lymphatic glands. This does not constitute an important feature in this girl's case.

The spleen is the chief organ involved, and while the spleen is in Hodgkin's disease frequently enlarged, the enlargement is seldom very apparent until the lymphatic glands are very distinctly involved, and far beyond what is present in this case, otherwise one could not by the examination of the blood exclude such a diagnosis.

*Pernicious anæmia*, again, is a disease chiefly of adults. In children it is rare. The disease is progressive in its character. The hæmorrhagic tendency is common. The spleen may be slightly enlarged, but great enlargement is not a feature of the condition. In all these respects our case differs from "pernicious anæmia," so also with regard to the examination of the blood. Though the poikilocytosis and the presence of the red nucleated corpuscle and even the leucocytosis under certain conditions are compatible with this diagnosis, it is not so with the relative diminution of the red blood corpuscles and the hæmoglobin. In pernicious anæmia the hæmoglobin does not suffer the same diminution that the red blood corpuscles do. In the present case the diminution is most of the chlorotic type, the percentage of red blood corpuscles being greater than that of the hæmoglobin.

*Splenic anæmia* is the only name that can be given to the condition present in this case.

The name is not one of the best, because it is by no means an ascertained fact that the anæmia is caused by the condition of the spleen. The anæmia and the enlargement of the spleen being two very prominent features of the condition, the name may very well remain for want of a better.

Two very definite conditions have been described under this name, and yet the case presented to you differs from both in certain important respects.

The first type is fully described by West in what is perhaps the most recent article on the subject. This will be found in Clifford Allbutt's *System of Medicine* (vol. v, p. 539), and it is in reference to this article that Sir William T. Gairdner very fully discussed the case when it was under his charge. West's initial definition of splenic anæmia is that it "is a form of profound anæmia, progressive in character, ending fatally, generally of no long duration, associated with great enlargement of the spleen, but without leucocytosis or enlarged glands."

In the later stages of the disease the anæmia is profound, the loss of strength is extreme. The patient suffers attacks of severe pain in the region of the spleen. Hæmorrhages, especially epistaxis, are common. The temperature is usually raised, and of the hectic character. The disease is one of adult life, though a case as young as 9 years has been recorded. The duration is not long, usually from six months to two years, rarely longer, though a case has been reported by Müller extending over four and a half years.

The case before you agrees in some points with the above description. There is the anæmia, chiefly of the chlorotic type, and the enlargement of the spleen, associated with attacks of pain, but only on one occasion of a severe character. The lymphatic glands are only slightly enlarged in some regions. There are, however, very essential points of difference. Perhaps the most important is that the disease has not shown the progressive character described above. The patient has certainly been affected for seven years, and probably for a year or two longer, and of late, instead of there being deterioration of health, there has been slight improvement. She has gained nearly 10 lb. since February last. Though this is not a great deal, it is in the right direction. The condition of the blood has also improved a little.

Again, there is the absence of all tendency to hæmorrhages, and though the temperature when she was first admitted to hospital was of doubtful significance, yet it could never be said to have shown anything like the type of hectic fever indicated by West as being usually present.

Lastly, the age of the child when she first turned ill was one at which the disease is uncommon, though curiously enough the child was then 9 years old, the age given of the youngest case on record.

Reference must now be made to a second form of splenic anæmia which is found in infants. West made special reference to this condition in a "Discussion on Enlargements of the Spleen in Children," which he opened at the annual meeting of the British Medical Association held this year at Ipswich. A full report of this discussion, and of West's remarks on this form of splenic anæmia, will be found in the *British Medical Journal* (1st September, 1900, p. 567).

I will not enter into the description of this condition further than to state that we may have in the infant, as in the adult, a profound anæmia, associated with great enlargement of the spleen. The liver in about 50 per cent of the cases is enlarged,

while there is little or no general enlargement of the lymphatic glands. The examination of the blood shows the anæmia to be of the chlorotic type, but nucleated red corpuscles and megalocytes are often found. Hæmorrhages are not uncommon. Fever may be moderate or of the hectic type; usually there is none. Gastro-intestinal disturbances are common. This condition in the infant is by no means of the same grave character as that first described as occurring more commonly in the adult. Nearly 40 per cent of the cases of splenic anæmia in the infant make complete recovery. In some cases, however, the health seems restored, and the spleen is much reduced in size, but relapses occur, so that though in the end recovery may take place, yet the duration may extend over many months, and the spleen may remain enlarged for two or three years.

Thus it is that cases recognised for the first time in young children have probably been first affected in infancy. But the case I have shown you does not seem to have been first affected in early infancy. In any case it presents characters much more persistent than anything represented in the above description. The anæmia and the enlargement of the spleen has persisted probably for a considerable number of years, associated with a varying degree of asthenia, and, again, the hæmorrhagic tendency, as has been pointed out, is absent in this case, so also is another feature of splenic anæmia in infants—gastro-intestinal disturbances.

For these reasons we cannot say, with any degree of assurance, that the condition could have arisen out of this so-called splenic anæmia of infancy, though the non-progressive character of the condition is more in accordance with this type than with the type first described, so commonly met with in adults.

Our idea of splenic anæmia, I think, cannot be limited to those two types of cases.

Many cases will be found where anæmia and enlargement of the spleen go together, but not of a progressive character, and with no hæmorrhagic tendency. The anæmia, however, tends to persist, and the spleen remains enlarged. I have seen such cases in children far beyond the age of infancy, also in young adults, and I do not think they can all be assigned to the class of secondary anæmias associated, for example, with syphilis. These seem, like this case, primary anæmias, even although they have a doubtful history as far as specific disease is concerned. On the other hand, many cases have no such suspicious history at all.

It seems, therefore, to me that we must recognise other cases than those described by West under splenic anæmia, tending towards a fatal termination, and the infantile form where cure is not uncommon within a comparatively short period.

It may be that we need a nomenclature that will separate the different forms, but we will require to know much more about the pathology of these conditions before any such differentiation can take place.

In the meantime, splenic anæmia must consist of a series of cases, by no means the same in their origin and progress, as the types already discussed distinctly show, but all characterised by marked anæmia and enlargement of the spleen, and with blood conditions which do not permit them being classified with any well recognised type as we know them at present, such as pernicious anæmia and leukæmia.

*Causation.*—The most probable cause in operation, apart from constitutional diseases, in many of these cases is not so much a disease of the spleen or an overactivity of its hæmolytic function, causing an impoverishment of the blood, as a toxæmia, the nature of which it is impossible as yet to determine, but suggested in many cases (as in rickets and the infantile form of splenic anæmia) by gastro-intestinal disturbances, the alimentary canal being in these cases the possible source of the toxins. Other forms of toxins may have their origin elsewhere, and be of a different nature.

Our case has never been the subject of gastro-intestinal disorders, and it would be vain to speculate further on the exact cause.

With regard to the treatment adopted, it was chiefly of a general character; at first, rest in bed with good food, and later, the administration of arsenic alone, then of arsenic combined with iron.

In presenting this case before you, I have to acknowledge the use of the report of the case drawn up by Dr. Watson, late house physician to the Western Infirmary, and of notes on the case dictated by Sir William T. Gairdner. I have also to acknowledge the kindness of Professor Muir in granting me the use of some of the microscopic slides which demonstrate the blood condition. These showing the nucleated red corpuscles and the myelocytes are his, the others showing the ordinary forms of leucocytes and the eosinophile cells have been prepared by myself.

CASE OF TOTAL APHASIA AND RIGHT HEMIPLEGIA  
IN A PATIENT WHO HAD PREVIOUSLY LOST HIS  
LEFT ARM BY ACCIDENT.

By JOHN HENDERSON, M.B., CH.B.,

Formerly House Physician and House Surgeon, Glasgow Royal Infirmary.

THE following case is worthy of record on account of its somewhat unique character, viz., the occurrence of right hemiplegia with total aphasia in a man who had previously, as a result of an accident, lost his left arm at the shoulder. He was thus rendered absolutely helpless.

W. J., æt. 44, signalman, admitted to Ward 11, Glasgow Royal Infirmary, on 11th June, 1900, under the care of Dr. T. K. Monro, suffering from right hemiplegia with total aphasia.

*History* (obtained from his friends).—Until the onset of his present illness, patient was always strong and healthy. He lost his left arm at the shoulder about five years ago, the result of an accident while employed in the electric room on the railway. He was always steady until about two years ago, when he began to take alcoholic liquors, and since then he has at times indulged to excess. There is no history of headache, vomiting, or convulsions, and no cause can be assigned for patient's present condition.

He was at work until Saturday, 9th inst., when he came off duty feeling in his usual health. Next morning, when his landlady took in his breakfast at 8 A.M., he appeared to be quite well, and conversed with her. Two hours later she returned to remove the dishes, but found that he had eaten nothing, and that he was unable to answer her questions. She thinks he understood what was said to him, as he signified his approval or disapproval by a nod or shake of the head. He lay in this condition all 10th inst., and was removed to Infirmary on 11th June.

*Condition on admission.*—Patient has a healthy and well-nourished appearance. The pupils are equal, and contract to light, and in accommodation. The conjunctivæ are sensitive. There is no distinct paresis of the face, although it may be noted that the mouth is slightly drawn to the left. Right eye is not so completely closed as the left when the eyes are shut. Ophthalmoscopic examination reveals a considerable degree of myopia, but no optic neuritis, or albuminuric retinitis.



Pulse numbers 80 per minute, and is small, regular, and of good tension. There is little or no thickening of the arterial wall. Respirations number 25, and are regular. Temperature is normal. Heart, lungs, and abdomen are normal. Urine (drawn off by catheter) contains a trace of albumen, but no sugar. The left arm has been amputated at the shoulder. There is complete paralysis of right arm and leg. Sensibility to pain is absent on the right side. Knee-jerks are both exaggerated, the right being greater than the left. Ankle clonus is present on right, but absent on left side. Plantar reflex is constituted on the right side by extension of the great toe, but not actively, and on the left by flexion. Cremasteric, abdominal, and epigastric reflexes are present on left, but absent on right side.

Hearing is very acute in each ear, and patient seems to be able to understand most of the simple propositions submitted to him. He does not appear to be able to protrude the tongue, though he opens his mouth when told to do so. He appears to recognise written words to be such, but does not understand them, and it is doubtful if he can count them. In answer to instructions, or in reply to questions, he makes signs by nodding the head freely, and occasionally by shaking his head. The accompanying expression of his features sometimes makes it evident that he understands, but sometimes he is clearly wrong, and sometimes he nods his head obliquely and in a hesitating manner, when he appears to imply a negative. He cannot utter any word, but there is one sound which recurs very frequently, and is sometimes repeated many times in close succession. It resembles most closely either the last two letters of the word "yes," or the first two of "six." He cannot repeat words or read aloud. Writing, too, is impossible on account of the absence of the left arm and the complete paralysis of the right. The power of reading is absolutely wanting. He obeys one or two simple directions when these are given orally, but when they are printed in capitals he fails to obey; and not only so, but, when he tries to spell the words, he is quite unable to name the letters. Half or more he calls "S," one or two "I," and to some he gives fictitious names, as, repeatedly, "Simi," and occasionally "R;" but only four or five sounds are available altogether. With regard to written characters, as, for instance, his own name, the inability to read is absolute. The same is true of numerals, both Roman and Arabic. He applies the same designation to a series of different characters, and employs many fictitious

ones. He has no idea of the number of characters present in a given space.

The question of object blindness is raised by the fact that, when a wide space between two letters or figures is pointed to, he responds as if he recognised it. If present, however, it is only very partial, as there is no difficulty with regard to the recognition of food, and he appears to recognise his nurses and visitors. The special senses cannot be examined in detail on account of the aphasic condition. The inference, however, from the tests, is that smell, as well as taste, is preserved on the affected side.

For a few days after admission, patient lay in a condition almost approaching coma, although he was only actually unconscious for part of one day. Thereafter there was every appearance of complete consciousness, although associated with almost absolute helplessness.

At first the evacuations were all passed in bed, but latterly he was able to attract attention when necessary by calling out "here." The bowels were always constipated, and could thus be controlled by enemata.

One month after admission, some wasting of the right arm was noted, especially of fore-arm and hand. There was little rigidity, but a marked increase of myotatic irritability all over the arm, and in the deltoid and pectoralis major muscles. The circulation in the right arm became very sluggish, especially in the distal parts.

Three months after admission, the tongue was protruded for the first time, and was seen to deviate distinctly to the right. When he attempted to show his teeth, the face was drawn to the left, but in smiling this was less obvious. He ceased to use the word "yes," and substituted "aye."

The symptoms pointed to cerebral softening, resulting from obstruction of the trunk of the left middle cerebral artery. In view, however, of the complete and hopeless nature of the patient's ailment, a consultation was held to consider whether the possibility of the lesion being an extensive effusion over the cortex were too remote to justify an attempt at relief by operation. This, however, was decided against.

## CURRENT TOPICS.

UNIVERSITY OF GLASGOW.—List of Degrees in Medicine conferred on 1st November, 1900:—

## DOCTORS OF MEDICINE (M.D.)

## OLD REGULATIONS.

I. *With Commendation*.—Leslie Buchanan, M.B., C.M., Ireland (*Thesis*, "Cyclitis: a Study of the Inflammatory Exudates into the Vitreous Body in Cases of Cyclitis"); Malcolm Alexander M'Intyre Sinclair, M.B., C.M., England (*Thesis*, "A Study in Aphasia, with special reference to some of its Transitory Manifestations").

II. *Ordinary Degree*.—Archibald Fairlie, M.A., M.B., C.M., Scotland (*Thesis*, "Clinical Observations on Enteric Fever, with Notes and Impressions of a Personal Attack"); James Reid Foulds, M.B., C.M., Scotland (*Thesis*, "Puerperal Fever: its Source, Prophylaxis, and Treatment, with Cases"); William Tweed Hannah, M.B., C.M., Scotland (*Thesis*, "A Clinical Study of Osteo-Arthritis"); Duncan Sinclair Kennedy, M.B., C.M., Scotland (*Thesis*, "Tuberculosis in Man and the Lower Animals").

## NEW REGULATIONS.

I. *With Commendation*.—Annie Louise M'Iroy, M.B., Ch.B., Ireland (*Thesis*, "Tubal Gestation: its Pathology and Diagnosis, as illustrated by the record of Twenty-two Cases").

II. *Ordinary Degree*.—Thompson Campbell, M.B., C.M., Scotland (*Thesis*, "The Sanatorium Treatment of Pulmonary Tuberculosis, with the records of several Cases, and the results of a Year's Work at the Consumption Sanatorium, Bridge of Weir"); Joseph Adam Clarke, M.B., Ch.B., Scotland (*Thesis*, "A Study of Acute Lobar Pneumonia"); Robert Campbell Highet, M.B., C.M., Scotland (*Thesis*, "Blackwater Fever, with Notes of a Case, and Observations on the Etiology of the Disease"); William Llewelyn Jones, M.B., C.M., Wales (*Thesis*, "The Dyspepsia of Breast Babies, with special reference to its Etiology"); Marion Jamieson Ross, M.B., Ch.B., Scotland (*Thesis*, "The Sensory Phenomena associated with Hemiplegia").

## BACHELOR OF MEDICINE AND MASTER IN SURGERY

(M.B., C.M.)

Peter Skinner Clark, Scotland.

## BACHELORS OF MEDICINE AND BACHELORS OF SURGERY

(M.B., Ch.B.)

I. *With Honours*.

James Dunlop Lickley, England.

II. *Ordinary Degree*.

William Adam Burns,	Scotland.	James Macpherson Henry,	Scotland.
Gertrude Jane Campbell,	"	Charles Milburn Hope,	England.
Charles Peter Garvie Crichton,	"	Alexander King,	Scotland.
John Downie,	"	Alexander Leitch,	"
Matthew William Fraser,	"	Donald M'Farlane Livingston,	"
Lila Stephenson Greig,	"	David Dale Logan,	"

Alexander MacCulloch,	Scotland.	Thomas Neill,	Scotland.
George Steventon M'Kinnon,	"	Agnes Brymner Sinclair,	"
Duncan Mackenzie MacRae, M.A.	"	Mabel Talbot,	England.
Jean Marion Farie Marshall,	"	Robert Bryers Thom,	Scotland.
Peter Moir,	"	John Young (Glasgow),	"
Daniel Morrison,	"		

**MATERNITY HOSPITAL.**—The following have been appointed house surgeons as from 1st December:—*In-door*, James Scott, M.A., M.B., Ch.B.; *Out-door*, John Aitken, M.B., Ch.B., and John Henderson, M.B., Ch.B.; *West End Branch*, Auguste Boyes, M.B., Ch.B.

**GLASGOW EASTERN MEDICAL SOCIETY.**—The following office-bearers were appointed for session 1900-1901:—*President*—David Young, M.D.; *Vice-President*—David Couper, M.D.; *Secretary*—John Patrick, M.A., M.B.; *Treasurer*—Robert Wilson, M.D.; *Reporting Secretary*—P. S. Buchanan, M.B., C.M.; *Seal Keeper*—Jas. Philip, M.B., C.M.; *Council*—David M'Kail, M.B., Ch.B., Samuel Capie, M.B., C.M., John Wilson, M.D., Miller Semple, M.B., C.M., Wm. M'Farlane, M.B., C.M., D. J. Young, M.B., Ch.B.; *Auditors*—J. Wilson Mathie, M.B., C.M., A. C. Muir, M.B., C.M.

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## MEETINGS OF SOCIETIES.

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### GLASGOW MEDICO-CHIRURGICAL SOCIETY.

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SESSION 1900-1901.

MEETING II.—19TH OCTOBER, 1900.

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*The President, MR. H. E. CLARK, in the Chair.*

**I.—PATIENT OPERATED ON SIX MONTHS PREVIOUSLY FOR ABSCESS OF THE TEMPORO-SPHENOIDAL LOBE, ORIGINATING IN MIDDLE EAR DISEASE.**

BY DR. H. RUTHERFURD

Thomas M'I., æt. 19, admitted to Ward 25 of the Glasgow Royal Infirmary on 3rd April, 1900, as an urgent case, on the recommendation of Dr. Neil Campbell. The symptoms were

of three weeks' standing, and consisted in pain in the left side of the head, with, during the latter part of that time, a varying degree of stupor, amounting on one day shortly before admission to complete insensibility. These were associated with discharge from the left ear of old standing. The day after admission he was seen by Mr. Clark, when his condition had greatly improved, and it was decided to keep him under observation in order to get a clue to the area of pressure.

Having come on duty on 8th April, my attention was drawn to the case with the statement that since the previous day he had been much worse, moaning constantly, complaining of pain in the left side of the head, and lying on that side with his face down. I found him in a condition of very pronounced stupefaction, answering questions confusedly, and with no exact sense of how long he had been ill or of where he was. There was some facial paralysis on the right side, by no means complete, and more marked in the lower than the upper part of the face. The pupils were mobile, but the left did not contract so fully as the right. No distinct paralysis of the tongue could be made out, but there seemed to be slight weakness of the muscles protruding it on the left side, it being protruded rather to the left. No difference could be made out in the hand grasp, and on both sides it was feeble. Patient seems to have undergone considerable emaciation. The pulse is slow, under 60; respirations, 16; and temperature, which on admission was 100°, has come down gradually till it was 97·2° this morning.

*9th April.*—Pulse and respirations continue at the same rate. The temperature is still 97·2° at 4 A.M., and 97·8° at 8 A.M. He is more stupid than he was, and the dilatation of the left pupil is more pronounced. There is also ptosis of the left upper eyelid. Yesterday and to-day it is noted that he lies persistently on the left side, burying the left side of the face in the pillow.

Percussion of the skull elicits no sign of tenderness over any part of his skull, nor is any difference in percussion note recognisable by Dr. Rutherford.

There is noted a discharge from the left ear, and a scar behind the pinna, the result of an incision made two years ago in another institution.

It was decided to explore the left temporo-sphenoidal lobe for pus, and, after consultation with Mr. Clark, this was done, a disc being removed immediately above the zygoma, and with its centre slightly in front of the external auditory meatus. The dura was found bulging and fixed, as was the thin layer

of cortex below it. This was not more than an eighth to a quarter of an inch in thickness, and, being punctured with sinus forceps, there escaped about 1 oz. of stinking, sloughy, and sanious pus.

A small amount of chloroform was given, and during its administration the dilatation of the left pupil became more marked; before leaving the table, the left pupil had contracted nearly to the size of the right, while the pulse had risen to 70.

The cavity was packed with iodoform gauze, and a small rubber tube left in with it.

*12th April.*—Yesterday patient seemed so well that the special nurses were withdrawn. Last night he complained of pain in the side of the head, and was very restless; this, so far as could be found from the nurses, was the only pain complained of since the operation. This morning he is drowsy and stupid, with some confusion and difficulty in finding words; could not tell the name of the street he lived in, and used some meaningless words. Temperature went up to 100·3°, and there it remains. On removing the dressings and tubes, some thin offensive pus escaped, and it is noted that there is discharge from the ear.

*13th April.*—Dr. Rowan kindly examined the eyes, and reported as follows:—“ . . . Eye movements normal. . . . Pupils react to light and accommodation, better to the latter. The right pupil responds better to light than the left, and also better to accommodation. Double optic neuritis, better marked in the left.”

*16th April.*—This morning patient was put under chloroform, and Dr. Rutherford operated on the mastoid and middle ear, using gouges and the dental burr. The roof of the external meatus and the tegmen were removed, and the dura and cortex divided, so as to make the cavities into one.

There is still some right facial paralysis present, but it is less marked and only noted when the patient smiles. The pupils are now equal, and react readily to light. The tongue is protruded straight, and questions are answered intelligently.

*18th April.*—The slight pain complained of after the operation has entirely disappeared, and patient feels much improved.

*19th April.*—To-day, for the first time, patient was able to pass urine without use of the catheter.

*27th April.*—Dressings changed; wound looking well; united all round in front, but behind there is some hernia cerebri about size of a filbert. Patient is rapidly improving in his general condition.

*12th May.*—Dressed. At last dressing Dr. Rutherford fitted in a piece of pasteboard to make pressure on the hernia cerebri, and this has had good effect in reducing its bulk. A small piece of perforated zinc was used to-day. The wound is clean, and the patient is now going about the ward.

*29th May.*—Hernia cerebri has quite disappeared. Trephine flap quite healed, and pulsation is now confined to the region of the trephine opening on the skull. There is still slight discharge from the lower end of mastoid wound and from the meatus, but dressings are only changed once in eight or nine days.

Dynamometer shows, with left hand, 42 k.; right hand, 28 k.

*29th June.*—As a fistulous opening persists behind auricle, and there is purulent discharge from the auricle, Dr. Rutherford to-day opened up the wound and made the opening in the bone wider; removed more of the ridge representing the inner end of the posterior wall of the meatus; finally, split the posterior wall of external meatus (cartilage and skin), and stuffed the cavity from the meatus, leaving also some packing in the posterior wound.

Patient left the hospital on 21st August, with the posterior wound almost closed, a raw surface being still visible from the meatus. An attempt had been made to get this completely healed by the application of small grafts.

*19th October.*—At this date the patient has been back at his usual work for the last six weeks. There is no trace of any paresis of the third or facial nerve. He has good use of his hand, and can write as well as ever, but the dynamometer shows a slight comparative weakness persisting (right, 30 k.; left, 34 k.)

The wound on the mastoid is healed, but there is still a small granulating surface visible from the meatus.

The case seems to me of value in several particulars—

1. As illustrating the insidious development of cerebral abscess.

2. As a typical example of temporo-sphenoidal abscess with its general and local signs (there being stupor, with loss of voluntary micturition persisting for a week after operation), and double optic neuritis more marked on the affected side; almost complete paralysis of the right arm (cortical), complete paralysis of the third nerve, paresis of the right facial—that of the third being from interference with the left in its course, while that of the facial must be supposed to have been cortical,

as indeed was indicated by its incomplete distribution. The apparent paresis of the left side of the tongue remains unexplained.

3. The management of hernia cerebri.

4. The dangers of persistent otitis media.

## II.—CASE OF INTERNAL SUBASTRAGALAR DISLOCATION OF THE FOOT, REDUCED BY OPEN OPERATION.

BY DR. H. RUTHERFURD.

William R., aged 13, was admitted to Ward 25 of Glasgow Royal Infirmary on 3rd April, 1900, with an injury to the left foot, caused by its having been caught by the wheel of a bogey and crushed against the rail.

On admission, the whole foot was much swollen, and the soft parts tense. It was kept in fomentations with a view to reducing the swelling and facilitating recognition of the exact nature of the injury. The foot was somewhat inverted, and showed two marked bulgings—one in front of the external malleolus and the other on its inner border, apparently due to a displacement of the scaphoid.

A skiagraph taken with the foot lying on its inner surface showed the head of the astragalus to be engaged under the scaphoid.

It having been found impossible to reduce the deformity by manipulation, patient was put under chloroform on 13th April, and the attempt repeated without avail, before cutting down on the displacement. An incision was then made on the inside of the foot over the situation of the neck and head of the astragalus. The knife entered a cavity, the anterior wall of which was formed by the completely displaced scaphoid; and the relations of parts being now quite plain, I endeavoured with an elevator to prize back the scaphoid and bring up the astragalus head. This I was unable readily to do, the bones being very tightly held together by the stretched ligaments, and there having been some stripping of cartilage from the head of the astragalus.

I therefore cut down on the outside of the foot over the prominent head of the astragalus, and succeeded in levering it back from this side.

Both wounds were stitched, and the foot put up in a stiff dressing.

Thirteen days later the dressings were changed, and the foot put up in plaster of Paris, with instructions to the patient



that this was to be worn for a month. As a matter of fact, he took it off in about a week, and thereafter found that he had good use of the foot.

He was seen on 1st June walking firmly and freely, and has now (six months after the injury) a foot with good arch and good spring.

*Note.*—A good representation of the external appearances in this condition is given in Walsham's *Surgery* (fifth edition, p. 419) from a cast in St. Bartholomew's Hospital Museum, and another in Treves' *System of Surgery* in the article on "Dislocations" by Mr. Sheild.

*Dr. Kennedy* said he had a similar case some time ago. He cut down and found the astragalus almost completely rotated. He divided the internal lateral ligament, and replaced the bone. The result was very good. A few weeks ago he had another case, but of old standing. There was a marked prominence on outside of foot, the astragalus presenting below outer malleolus. He removed a wedge from head of astragalus, and forced the bone back. The result is fairly good.

*Dr. Newman* said he had a similar case, but there was also fracture of the fibula. He reduced the deformity without an operation.

*Dr. Rutherford* replied, insisting upon the differences between dislocations of the astragalus and subastragalar dislocations.

### III.—KIDNEY SUCCESSFULLY REMOVED FOR COMPLETE TRANSVERSE RUPTURE.

BY DR. H. RUTHERFURD.

*History.*—James K., aged 16, was admitted to Ward 25, Glasgow Royal Infirmary, on 18th September, 1900, with a note from Dr. J. A. Green stating that he was the subject of a rupture of the kidney. About noon on the previous day, while riding a bicycle, he was thrown from it either by collision with a tramway car or by a slip in trying to avoid it, and, falling against the car, received such a bruise of the right side that he had to be taken home in a cab. From the time he got home till seven o'clock on the next morning (day of admission) the urine passed contained more or less blood. No blood was seen in the urine after his admission to hospital.

Pain was complained of all over the abdomen, with boarding of the muscles and general tenderness, though it is noted that the pain in the abdomen was not localised. Patient lay on his back with his legs drawn up and his trunk bent over to the right side, as if to relax tension on the right lumbar region. Dulness to superficial percussion extended forward nearly to the anterior axillary line, interfering with the region of the colon. There was no bulging in the loin.

The pain was more or less constant, and so severe that patient cried from time to time during the day of admission, and had one-eighth of a grain of morphia in the afternoon. Fomentations had been used at home, and were continued after admission, and seemed to give some relief when they were freely applied.

There was no appearance of shock. The pulse, on admission, was about 108, respirations 40, and temperature that afternoon 101.2°.

From early morning till 8 P.M. he had only passed 7 oz. of urine, and this was quite free of blood.

On the 20th it was noted that the condition was much as before, except that while the pain was less severe and the tenderness more localised to the right side of the abdomen, it was possible to feel a more definite resistance in that region.

Temperature on the 19th was 101.6°. To-day the pulse is rather more frequent (114) than on admission, respirations have fallen somewhat (to 30-35), and the tongue is decidedly dry.

No purgative has been given, in view of the risks to any compromised portion of the bowel. Three separate enemata have not produced any satisfactory stool.

This morning, after consultation with Dr. James Adams and Dr. Paterson, it was decided to operate, and, the patient having been put under chloroform, an incision was made parallel to the last rib and about a finger's breadth below it. On dividing the lumbar aponeurosis, black blood in more or less clotted condition escaped, and was removed with fingers and swabs to the amount of what seemed about a pint. The kidney itself was found torn, or fractured across, and separated from the ureter and blood-vessels. On removal of the two portions, the fractured surfaces were covered with a layer of firm clot. The surface of the kidney showed patches such as are usually associated with embolism, alternating with areas darkened by extravasated blood. Only one vessel was tied, a vein connected with the upper fragment. Little or no arterial bleeding was seen.

The wound was stitched in part, and packed with iodoform gauze, and gave no further trouble till a month later (20th October) when, on taking off the dressings, Dr. Rutherford was surprised to find some pouting granulations in the middle of the scar, and, on exploring the sinus, found a piece of gauze packing which had become buried. Its withdrawal was followed by suppuration, which necessitated the use of a drainage-tube for a few days. The patient is now (4th November) in excellent health, and has been going about the ward for some days.

On the day of admission patient passed 7 oz. of urine in the first twelve hours; during next day, 29 oz.; on the 20th (day of operation), 7 oz.; on the 21st, 21 oz.; on the 22nd, 20 oz. were collected, but some was lost owing to his having his bowels moved by medicine. Next day, the 23rd, 46 oz. was recorded, and thereafter it seemed that good compensatory action had been established.

The chief points of interest in this case are the mode of injury and the possible fallacy due to the disappearance of blood from the urine, and the otherwise mild character of the symptoms.

As regards the first of these, the boy was of opinion that he was thrown with his right side against the car. While he may be quite right as regards this, it is to be noted that there was no superficial mark of injury, and it is suggested that we have here an example of rupture by indirect violence, in fact, by sharp flexion of the trunk crushing the kidney.

The disappearance of an immediately produced hæmaturia suggests three possibilities:—

1. That the injury has been only slight.
2. That the ureter is blocked by clot.
3. That the ureter, with or without the vessels, is completely torn across.

In this case, the first of these was disposed of by the diminished amount of urine passed, the presence of a considerable tumour, and the febrile condition. As between the second and third, it seems to me that no opinion could be formed without the knowledge gained by operation, and that on this ground alone operation was called for, besides the reason which exists in the possibility of later infection and suppuration in and about the extravasated blood.

Such a case, with its circumscribed extravasation of blood, differs in important respects from those in which the blood escapes into the peritoneal cavity, and also from those in

which, with or without primary invasion of the peritoneal cavity, the colon or the duodenum is involved. That this latter complication ever happens in indirect violence I think is not likely.

*Dr. Newman* said he had seen a large number of cases of rupture of the kidney. He sutured a ruptured kidney with very good result seven years ago. The kidney in that case had been ruptured by a fall, but the rupture did not extend into the pelvis of the kidney. He had another case five years ago where there was hæmaturia, and the bladder was blocked by clots. The clots were broken up, and got discharged. The hæmaturia disappeared, and the man recovered. Six months after, the same patient was operated upon for movable kidney. At the operation a large cicatrix was found in the kidney. Some time after the bladder was examined, and urine was seen to be coming from the ureter which was connected with the kidney which had been injured. *Dr. Rutherford's* patient might have recovered without operation, but as injured kidneys were very liable to become septic, he thought it better that such cases should be operated upon, and the kidney removed.

#### IV.—CASE OF ANÆMIA IN A YOUNG GIRL, ASSOCIATED WITH ENLARGEMENT OF THE SPLEEN.

BY DR. R. BARCLAY NESS.

*Dr. Ness's* paper appears as an original article at p. 405.

*Professor Stockman* said that he considered the case to be undoubtedly one of splenic anæmia. He had seen several such cases within the past eight years, and one case corresponded exactly in all its symptoms with *Dr. Ness's* case. In that case the spleen was still enlarged; hæmoglobin, 50 per cent; red blood corpuscles, 3,000,000 per cubic mm. Now and again she complained of attacks of pain in the region of the spleen. She has had hæmorrhages from nose and elsewhere, but never suffered from dyspepsia. He does not think the term splenic anæmia a good one for this disease, as the spleen has nothing to do with the production of it. The anæmia is due to hæmorrhage into spleen and liver, and the yellow colour in the skin is due to the same cause. It is difficult to assign a cause for the inflammation. There is no special form of treatment. Arsenic and ferrum have no effect on the disease.

*Dr. W. K. Hunter* said that, to him, splenic anæmia was a

somewhat obscure disease. He regarded it, however, as having a close relationship to Hodgkin's disease and to the different forms of leukæmia. Indeed, he held that splenic anæmia had much the same relationship to splenic leukæmia that Hodgkin's disease had to lymphatic leukæmia. In Hodgkin's disease there was a general enlargement of lymphatic glands, but no considerable increase of lymphocytes in the circulation. In lymphatic leukæmia there were the same enlarged glands, but, in addition, great increase in the number of lymphocytes in the blood. In splenic anæmia there was the enlarged spleen, but no excess of white blood corpuscles, while in splenic leukæmia the enlarged spleen with great increase of white corpuscles in the blood. Otherwise, the symptoms in the four different conditions were much alike, except that, in the cases of leukæmia, they were much more acute than in the cases of splenic anæmia and Hodgkin's disease.

As regards the relationship of Hodgkin's disease to lymphatic leukæmia, it was difficult to be certain that the two conditions were not just different stages of the same disease. Clinically, the chief difference between the two depended on the number of white corpuscles in the blood. Pathologically, the difference lay (at least according to certain pathologists) in the presence or absence of lymphocytes infiltrating the liver, kidneys, and other tissues. By that was meant that in cases of Hodgkin's disease there was neither increase of lymphocytes in the circulation nor increase of adenoid tissue in the liver, while in lymphatic leukæmia there were both. But there were cases on record which seemed to form a connecting link between these two diseases, cases which were clinically Hodgkin's disease, but which on *post-mortem* examination were found to have the characters of lymphatic leukæmia. It is difficult, then, to understand such cases, unless Hodgkin's disease be regarded as a form of lymphatic leukæmia. The same difficulties would seem to apply to the differentiation of splenic anæmia from splenic leukæmia. Here, again, there were cases which clinically had all the features of splenic anæmia, but which on *post-mortem* examination showed infiltration of the liver and other organs, just as in a case of splenic leukæmia.

As to the etiology of splenic anæmia, little was known. The anæmia seemed to be due to destruction of red blood corpuscles rather than to deficiency in their formation. The relationship of the enlarged spleen to the anæmia was a matter in dispute, but the fact that five cases had been

recorded, where excision of the enlarged spleen was followed by disappearance of the anæmia, argued in favour of the spleen being a factor in the production of the anæmia. Whether the red corpuscles were destroyed in the spleen, or in the general circulation by some internal secretion derived from the spleen, it is difficult to know.

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## GLASGOW PATHOLOGICAL AND CLINICAL SOCIETY.

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SESSION 1900-1901.

MEETING I.—8TH OCTOBER, 1900.

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*The Vice-President, MR. A. E. MAYLARD, in the Chair.*

### I.—MALIGNANT DISEASE OF THE LOWER JAW.

BY DR. T. K. DALZIEL.

The case was one of squamous-celled epithelioma, for which extirpation of the jaw was done.

The incision extended from the angle of the jaw to beyond the middle line. All bleeding points were tied as soon as they were cut, until the mucous membrane alone was left. At the same time all the glands in the submaxillary triangle were cleared out. The mucous membrane was then cut through with scissors. In following this plan the passage of blood into the pharynx was avoided. The bone was then divided and removed. The mucous membrane of the cheek and of the floor of the mouth were then carefully united by a continuous suture of catgut outside of the buccal cavity. The patient left hospital thirteen days after the operation. Six weeks later the maximum displacement of the remaining jaw was half an inch. This happy result, Dr. Dalziel considered, was due to the immediate union of the mucous membrane. The patient can open the mouth as freely as ever, and can approximate the teeth quite well with a little exertion. The glands which were removed were not affected.

He was sorry to be unable to show the patient to the Society, as the man had gone home to the country.

*Dr. Rutherford* thought that it would be of great interest to see the case in six months' time from the operation. It

would then be possible to make a more correct estimation of the deformity. He did not attach so much importance as Dr. Dalziel to the cicatricial contraction as a factor in the production of the deformity which follows excision of the mandible. At the same time he did not wish to minimise the desirability of obtaining immediate union by suturing the mucous membrane, a proceeding which, he would point out, had now been in vogue for a considerable time. He was inclined to the belief that deformity in many cases results in spite of immediate union.

*Mr. Maylard* suggested that Dr. Dalziel might bring up the patient at the closing meeting of the session.

*Dr. Dalziel* replied that he would try and get the patient to come up for exhibition at the end of the session.

## II.—CASE ON WHOM CONJUNCTIVAL TRANSPLANTATION HAD BEEN DONE TO REMEDY THE CICATRICAL DEFORMITY FOLLOWING THE REMOVAL OF A PTERYGIUM.

By DR. T. SPENCE MEIGHAN.

Dr. Meighan's paper will appear in a future issue of the *Journal*.

## III.—SPECIMEN OF MENSTRUAL DECIDUA.

By DR. J. H. TEACHER.

Dr. Teacher communicated the results of his further investigations of the specimen of menstrual decidua or dysmenorrhœal membrane, which was shown at last meeting, and concerning which the Society had asked for a further report. The specimen was taken out of its jar and carefully examined with the naked eye and by further serial sections of portions.

The examination simply confirmed Dr. Teacher's first report. No trace of an ovum, or of remains of an ovum, or of a place where an ovum could have lain, could be discovered. The tail of the cast proved to be, on microscopic examination, what it appeared to the naked eye to be, viz., cervical mucous membrane rather badly preserved. Dr. Teacher was, therefore, of the opinion that to regard the specimen as an abortion was quite impossible.

In reply to questions about the history of the case, the following has been obtained from Dr. Holmes:—(1) "The patient did suffer from dysmenorrhœa. I was called in on account of the pain suffered, and the term 'difficult' was

used by the patient. The discharge was usually profuse." (2) "There is no knowledge on her part of any other membrane either before or since." (Dr. Holmes has not had to attend her since, as she has remained well.) (3) "She has never had an abortion, but had three children in rapid succession early in her married life." Thus there has been a period of seven or eight years of absolute sterility. (4) "I do not know the size of the uterus." (5) "The patient, who is an educated woman, and not at all shy, was very positive as to the impossibility of pregnancy."

In spite of the history not being characteristic of membranous dysmenorrhœa, in respect of the membrane being an isolated one instead of being one of a series passed at successive periods, Dr. Teacher remains of his original opinion. There is not a shadow of evidence that the specimen is anything but what he originally took it to be.

*Dr. Rutherford* asked if a single passage of membrane was a recognised symptom, or if such an occurrence was pathological. He understood that by "menstrual decidua" we mean the membrane of membranous dysmenorrhœa. He thought the matter should be submitted to a committee to investigate and report.

*Dr. J. K. Kelly* said that the term implies a *monthly* discharge, a condition which we have not got in this case. The essence of abortion is the presence of chorionic villi. If *in no part* of the membrane are these found, then we may apply the term "menstrual decidua." Dr. Teacher had not found an ovum, but whether or not it might be present was another matter. He would also be quite satisfied with the name if there had been a periodical appearance of the membrane. He would like to have the future history of the case.

*Dr. Teacher*, in reply, stated that there was no evidence of villi in the membrane, nor were there any remains of an ovum. This, he considered, put aside the theory of abortion, and he held to his original opinion that the specimen was one of menstrual decidua.

#### IV.—HYPERTROPHY OF THE MAMMÆ.

By DR. T. K. DALZIEL.

Dr. Dalziel's paper will appear in a future issue of the *Journal*.

*Mr. Maylard* mentioned that in this ailment the breast had



been known to weigh as much as 20 lb. Presumably it was only a question of time.

*Dr. J. K. Kelly* asked if there had been any appearance of secretion.

*Dr. Taylor* (who showed the specimens in the absence of *Dr. Dalziel*) said that there had been none.

*Professor Muir* commented on the use of the term "hypertrophy" in a condition in which we have merely enlargement without functional activity. The structure is fibro-adenomatous, and a peculiarity is the diffuse infiltration of the organ, as is also its bilateral distribution.

#### V.—MYXOMATOUS TUMOUR OF THE SCALP.

BY DR. ALFRED A. YOUNG.

Tumour (shrunk from hardening fluid) about size of half an orange, removed from scalp of an otherwise healthy man of 38 years of age.

It was situated between the occipital protuberance and the vertex of head, and lay in the subcutaneous area of the scalp superficial to the occipito-frontalis aponeurosis. It was sessile, though showing a tendency to pedunculation.

Tumour is of a somewhat lobulated character, and has a fine capsule, firmly adherent to the skin by means of the fibrous trabeculæ in that region, but easily detached from the underlying structures.

Sections of the tumour show it to be composed of mucous tissue, with branching cells and mucoid material, with a few fine fibres, numerous thin-walled blood-vessels, and many spaces with blood in them, possibly hæmorrhages, or of the nature of angiomatous tissue. There is no evidence of sarcomatous tissue.

Six years before operation patient had noticed a small lump on the back of the head, which was taken to be a wen, and which gradually grew until it assumed its present size. Tumour was looked on as a wen, but, on incision, there was considerable hæmorrhage and escape of some viscid material.

On 6th September, 1900, slight flaps of skin were dissected off the sides of the tumour, and it, along with the adherent skin, was easily detached from the underlying tissue. The wound, although there was considerable tension, healed by first intention, and patient left hospital in a fortnight.

*Mr. Maylard* asked if myxomata were mentioned as occurring in the scalp.

*Dr. Rutherford* asked if there were any history of a nævus or birthmark.

*Dr. Young*, in reply, stated that these tumours were not stated to occur in the scalp. He could get no information from the patient as to the existence of a nævus or birthmark.

#### VL—COMMUNICATION BETWEEN GALL-BLADDER AND COLON.

BY DR. JOHN GORDON.

I beg to bring before the notice of the Society a specimen which I think may be of some interest from a pathological point of view. The specimen is one of gall-bladder which, whilst communicating with the duodenum through the common bile duct, communicates also with the transverse colon by a canal half an inch to three quarters of an inch in length. This canal is patent throughout, as shown by the fact that a probe can be passed from the interior of the gall-bladder into the colon. There were practically no adhesions between the liver and surrounding coils of intestine. The gall-bladder contained two gall-stones, which I also show.

With regard to the formation of this abnormal communication, two questions present themselves—(1) Is it of the nature of a fistula, or (2) is it a duct?

With regard to the first, the presence of gall-stones in the gall-bladder might suggest the possibility of abscess formation occurring in the gall-bladder, which, subsequently pointing in the direction of the colon, became adherent to it; ulceration through the adhesion so formed; evacuation of the contents of the abscess into the colon; and, finally, shrinking of the abscess wall with the formation of a fistulous opening.

Had this been the pathology, one would have expected some adhesions between the neighbouring coils of intestine and the gall-bladder. The absence of adhesions led me to think the canal might possibly be of the nature of a duct. This, however, could only be affirmed or negated by making microscopic sections of the canal and examining to see if it had a lining of mucous membrane. This was not done, as it would have destroyed the specimen. The probability, I think, is that it is a fistula resulting from abscess.

*Mr. Maylard* asked if there had been any history. He considered the appearances those of a drawn-out adhesion. The condition contrasted with one which he had seen recently, in which the adhesions were numerous and dense.

*Professor Muir* had seen one case in which the opening was large, and in which there was a considerable amount of adhesion in the neighbourhood. He thought that he might put aside the possibility of *Dr. Gordon's* case being of the nature of an accessory duct. The calculi were faceted, and as there had been probably some more, he would like to know if any had been found in the colon.

*Dr. Gordon* replied in the negative to the questions of both speakers.

#### VII.—SPECIMEN OF PERFORATED APPENDIX.

BY PROFESSOR MUIR.

*Professor Muir* showed as a fresh specimen a perforated appendix, removed this morning from a *post-mortem*.

The appendix was coiled up behind the ileo-cæcal valve, and contained a large concretion in its middle third. The concretion measured three quarters of an inch by one inch. The distal third of the appendix was somewhat dilated. The proximal end of the concretion had ulcerated through the appendix, and, besides local exudation of lymph, there was a generalised suppurative peritonitis.

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### GLASGOW SOUTHERN MEDICAL SOCIETY.

SESSION 1900-1901.

MEETING III.—1ST NOVEMBER, 1900.

*The President, DR. WILLIAM WATSON, in the Chair.*

#### I.—A FRESH SPECIMEN OF HYDATID MOLE.

BY DR. JAMES WEIR.

*Dr. James Weir* presented for examination by the members a fresh specimen of hydatid mole, and remarked briefly on the pathological condition.

#### II.—A DISCUSSION ON "PLAGUE."

*Dr. J. W. Allan* introduced a discussion on the subject of the plague, and commented on the gratifying fact that the

disease seemed to be dying out in Glasgow. Some people were inclined to say "supposed plague"—a statement which, in his opinion, was foolish; for the advice of experts and bacteriological examination had proved the presence of the disease beyond doubt. So far, Glasgow had been fortunate in the smallness of the number attacked, and in the number of fatal cases. While, however, there remained only a few cases in the city, the position was still serious on account of the consequent interference with commerce and shipping.

Failure to detect and deal with early mild cases might further result in the later development of a more virulent form of the disease, and also the conversion of the city into an endemic centre.

According to Professor Simpson, "two features are specially characteristic of plague—first, the slow, irregular, and gradual manner in which the disease acquires a hold over a locality into which it is imported, and which may later on become the scene of an epidemic; and, secondly, the obscurity which often surrounds the earlier cases."

From this statement it would be seen how important it was to deal quickly and thoroughly with early cases. Of the types of the disease which he had seen at Belvidere hospital, the impression he formed *as he saw them at the time* was that they showed nothing characteristic until the local manifestation had been revealed. In one cases the *facies* suggested to him typhus fever, and in that of an old woman, very ill, bad typhus.

The lesson seemed clearly conveyed that bubonic plague might easily be missed unless one were on the lookout for it.

Dr. Allan then proceeded to describe briefly the various types of plague as enumerated by Professor Simpson and Mr. Cantlie, of London, viz., (1) the larval, ambulant, or abortive type, or pestis minor; (2) the bubonic; (3) the pneumonic; (4) the intestinal; (5) the typhus; (6) the septic; (7) the nervous; and (8) the puerperal.

In view of the different varieties of the disease of plague, the diagnosis was no easy matter, and the mild or *larval* type might readily be overlooked. Positive information, however, might be obtained by the aid of the microscope, and he would point out the value of "association" as a key in doubtful cases. What may be called the "house affection," or the "family connection affection"—the association by personal contact—was to be regarded as a valuable guide in diagnosis.

Speaking of the variable nature of the malignancy of plague, Dr. Allan gave some interesting information. Quoting from

the "Memorandum on the Progress of Levantine Plague in 1878-79, including the reappearance of the disease in Europe," by Mr. N. Radcliffe, he showed how at first the disease at Vetlianka on the Volga was of the mild glandular form, but which was succeeded in time by a more virulent type, and finally ended in the pneumonic form, in which there was a mortality of 100 per cent. This increased severity of the plague at Vetlianka was attributed to the approach of winter, which caused the inhabitants to pack themselves in their ill-ventilated, stove-heated houses. With regard to the geographical distribution of the disease, it had been known for years in India and China. Endemic in certain parts of these two countries, violent outbreaks spread from time to time. It was only too evident that the disease had now travelled beyond their boundaries, probably by commercial relationship, and to have become pandemic.

In conclusion, Dr. Allan remarked, seeing that plague may assume so many clinical aspects, and that the possibilities of its reintroduction to Glasgow were neither few nor remote, it behoved us, the medical profession, to keep on the alert for some time to come, and to report promptly to Dr. Chalmers, our medical officer of health, all doubtful cases. Let us not be lulled into a false security, for in that lay the greatest danger of all.

*Dr. Chas. E. Robertson* gave a short account of the illnesses of the patients Milloy, who, in hospital, were recognised as the first cases of plague in Glasgow. After a consultation with Dr. Thomas Colvin, who had also visited the Milloy family, both concluded that they had an infectious disease to deal with, and that the patients should be isolated in hospital. Accordingly, the patients were then notified, and removed as cases of doubtful enteric fever. Dr. Robertson further remarked that during his attendance on the family the cases presented features which, after excluding poisoning by irritant ingesta, suggested to his mind the possibility of typhus fever.

*Dr. Thomas Colvin* remarked that, as Glasgow had no special port sanitary medical officers to detect the introduction of infectious diseases from foreign ports, the city's first line of defence was the general practitioners, to whom the present discussion was of the greatest importance. He thought that one practical outcome of the discussion would be a resolution to the effect that the sooner the Corporation appointed a port sanitary medical officer the better for all concerned. In his opinion, it was a great blessing for the community that so

early in the outbreak of plague in the city they found no less than four cases of that disease in the same household. It was the association of the four cases that enabled him to say, without difficulty, that whatever the exact nature of the disease it must certainly be infectious. A consideration of the same circumstance also must have gone a long way in determining the provisional diagnosis of plague in Belvidere hospital. Another important fact the plague brought out was how little we yet know of the exact nature of natural immunity from any of the infectious diseases. Charles Milloy was brought into the closest personal contact with his brother, who died of plague. He slept with him, ate and drank out of the same dishes, and nursed him as best he could for the greater part of a week, yet he did not take the disease. Mrs. M., another patient of Dr. Colvin's, also slept with and nursed her own daughter, ill of the plague, for eighteen days, and escaped the disease. On the principle of phagocytosis, it might be said that they escaped the plague because their leucocytes were able to digest the plague bacilli. But the question still remains, why were their leucocytes able to do so, especially when it is known that both contacts were much run down through want of proper food and sleep?

Dr. Colvin then discussed at length the differential diagnosis of plague and enteric fever as seen in general practice, and, in summing up, said that, in his opinion, plague in the forms met with in Glasgow simulated many other diseases, and the only valuable differential sign was the bubo. From the bubo we had to exclude syphilis, gonorrhœa, and septic irritation. Finally, to complete the diagnosis, the plague bacilli had to be found by microscopical examination.

*Dr. Matthew Dunning* gave a short account of the cases of plague he had met with in practice during the epidemic.

*Dr. A. K. Chalmers*, in the course of his remarks, gave an interesting history of the course of the plague in Glasgow. With regard to its similarity to typhus in point of rash, he remarked that the rash of plague, when present, resembled the late stage of the rash of typhus, and, moreover, appeared earlier. While the plague as experienced in Glasgow might reasonably be called a mild form of the disease, it was yet true that the mortality was considerable, being no less than 43 per cent, and approaching the mortality of the epidemic of the same disease in Cairo. In conclusion, Dr. Chalmers discussed at length the value of serum injections, the probable means of transmission of plague, and the probable causes of its variable malignancy.

## MEETING IV.—15TH NOVEMBER, 1900.

*The President, DR. WILLIAM WATSON, in the Chair.*

A DISCUSSION ON PLAGUE (*CONTINUED*).

*Dr. Charles Workman* resumed the adjourned discussion on the subject of bubonic plague, and gave a description of the *post-mortem* appearances of one of the fatal cases of the recent epidemic. The patient, a boy, aged 9 years, took suddenly ill with headache and vomiting when in bed during the early hours of the morning, in the evening a swelling appeared in the right axilla, and death took place on the third day of illness. External examination *post-mortem* revealed nothing abnormal, except the right axillary region which was swollen and somewhat fluctuant. Suspecting the case to be one of plague, *Dr. Workman* remarked that he first occupied his attention with the condition of things in the axilla, which he opened. The tissues were found to be much swollen and œdematous. A clear fluid escaped from the wound, and the parts immediately around the enlarged glands were infiltrated with a bloody fluid—hæmorrhage by diapedesis having presumably taken place. On opening the abdomen, the spleen and mesenteric lymphatic glands were found enlarged and congested. The brain and its meninges were found quite normal, and as no symptoms during life pointed to any pulmonary complications, the thoracic cavity was left unopened. From the glands and spleen, cultures were made on agar, and inoculations upon mice proved fatal in a few days. Proceeding to comment on the case, he thought it strange that though rapidly fatal none of the other inmates of the house caught the infection. As an explanation, he suggested that the very virulence of the attack and the early death prevented the distribution of the virus to any likely means of conveyance such as food. From his knowledge of infectious diseases, he was strongly of opinion that almost all are spread by the contamination of food and drink, and comparatively few by direct contact of patient with patient. In combating bubonic plague, therefore, great care should be taken to preserve food supplies from contamination. Food should be eaten as soon as possible after having been cooked. All uncooked fruit and vegetables should be avoided, for in large towns these are liable to contamination by such vermin as rats and mice. The

fact that in the case described the mesenteric lymphatic glands were enlarged and congested, pointed to the bowel as the probable medium through which, in his opinion, the virus had gained an entrance. Dr. Workman concluded his remarks by reverting to the case he had already described, in which he discovered a peculiar feature. Sections of the spleen and glands, when stained by Gram's method, showed scattered colonies of diplococci—probably Fraenkel's pneumococcus. This discovery demonstrated that there had been a mixed infection, and though no pulmonary symptoms were observed during life, the double infection he thought a possible cause for the rapidly fatal course of the disease. In connection with the subject, Dr. Workman showed cover-glass preparations from the axillary glands of the boy, stained with thionin, in which the plague bacilli were seen in enormous numbers.

*Dr. R. M. Buchanan* commented on some of the advantages which had followed the discovery of the plague bacillus in 1894, one of which was that the term plague, formerly applied, generally, to diseases with a high mortality, was now restricted to one particular disease. Detailing some of the characteristics of the bacillus of plague, special reference was made to its tendency to polymorphism, the formation of giant colonies on agar cultures, and the discoloration of the germ when subjected to staining by Gram's method. As a result of his experience of the recent epidemic in Glasgow, all the cases presented, in one or more regions of the body, glandular enlargements constituting the so-called bubo. The enlargement was in the inguinal region in five cases, in the axilla in one, and in the neck in one. Of the inguinal cases, two died in the acute stage without suppuration of the bubo; in one the bubo consisted of several glands in the condition of distinct abscesses; and in two the necrotic and suppurative process resulted in gangrenous openings discharging pus and connected with extensive suppurative infiltration of the tissues of the thigh and pelvis. In none of these cases was any solution of continuity found on the surface of the leg or foot, which might have admitted the infection. The cervical case presented points of great interest. The body was that of an infant, ten days old, born somewhat prematurely of a plague-infected mother. It sickened on the seventh day, and died on the tenth. A chain of characteristic buboes was found on each side of the neck, involving the deep cervical glands, and both lungs were studded with small pneumonic foci, sharply defined with zone hæmorrhage, while fibrinous exudation appeared on both pleural surfaces. The skin in one case



presented a faint typhus-like rash and some petechiæ; but in none were there found any of the grosser hæmorrhagic skin lesions, such as are found in virulent epidemics, and which, in olden times, gave to the disease the name of "black death." The general effect of the disease on the parenchymatous organs was seen in a cloudy swelling of the liver, kidneys, and suprarenal capsules. Death results in plague from the action of the toxin on the heart. With regard to the mode of distribution of the infection, Dr. Buchanan confessed that the subject still required much study. In this connection he remarked that the pneumonic form was the most dangerous of all, as the sputum—rich in plague bacilli—may undergo drying without diminishing the virulence of the contained germs. Inspiration of the dried particles of such sputum is almost certain to cause infection by way of the cervical glands, the lungs, or intestines. The discharge of pus from suppurating buboes does not appear to be attended with danger, as the virus is rendered inert in the process of suppuration. The urine and fæces may be the means of spreading the virus, but no well authenticated case was on record; and he had examined the dejecta in a number of cases with negative results.

*Dr. J. Brownlee* took part in the discussion, and made special reference to the value of serum injections. From his experience of the recent epidemic in Belvidere, he had arrived at the conclusion that the injection of serum had a prophylactic power, except in cases where there existed a mixed or purulent infection. The mode of injecting the serum was one of importance, and he advocated the intravenous method, where such could be carried out in preference to that of the subcutaneous.

*Dr. William Watson* briefly reviewed the discussion, and, in the name of the Society, thanked those gentlemen who had taken an active part.

GLASGOW EASTERN MEDICAL SOCIETY.

SESSION 1899-1900.

MEETING XIII.—18TH APRIL, 1900.

*The President, DR. W. L. MUIR, in the Chair.*

I.—TWO CASES OF CHOREA IN PREGNANCY.

BY DR. MALCOLM BLACK.

Chorea occurring in pregnancy seems to be an exceedingly grave condition, since its maternal mortality has been estimated as high as 30 per cent. Happily, its occurrence appears to be as rare as its gravity is great.

The following are notes of two cases which came into the Glasgow Maternity Hospital under my care, and, so far as I know, they are the only cases which have been admitted there during the last twenty-two years.

CASE I.—Mrs. C., aged 19, admitted 5th April, 1896. Sent from Glasgow Royal Infirmary with chorea. She is in her second pregnancy. Has never had chorea before. Her first child was stillborn, premature, in January, 1895. There appears reason to suspect syphilis in the father. Chorea began early in February of this year, and she was admitted to infirmary on 29th February. At the time of admission to the Royal, choreic movements were violent, but improved under rest and treatment. Patient believes she is seven months pregnant, but the height of the fundus does not seem to bear this out, as it reaches very little, if anything, above the umbilicus. The external os admits a finger; the internal is closed. There are jerky movements of left arm and hand. Facial muscles are also involved—more on left side than on right. The movements extend to the left leg, but not so marked, and sometimes also to the right leg and arm. She is readily excited. There is no definite rheumatic history. Both at the base of the heart and at the mitral area the first sound is prolonged, and second is accentuated, but there is no definite murmur. Pulse of moderate tension, regular, 76.

6th April.—Passed a rather restless night on 5th, in spite of 15 minims of Battley's solution twice. This morning she

had an attack of screaming, and violent movements, but was readily quieted.

*7th April.*—Last night she slept fairly well without a hypnotic. During sleep the movements are slight, but only cease in deep sleep. Patient's condition is improved to-day. She is much quieter.

*9th April.*—Given  $7\frac{1}{2}$  minims of Donovan's solution every six hours.

*13th April.*—The movements on the whole are less, but patient has had several attacks of screaming, hysterical in character. She also manifests delusions—imagining that people are shouting at her from the street and looking in at the window. To-day she has had an attack of screaming which lasted for an hour and a half.

On the nights of 9th and 10th she was sleepless.

*17th April.*—She is now getting 15 minim doses of Donovan's solution. The movements are less. Her mental condition is rather worse. She answers direct questions sensibly enough, but she has still the delusions above noted, and she is childishly unreasonable at times—*e.g.*, because her face was not washed on demand, &c. On nights of 13th and 14th she slept fairly well after 30 grs. of sulphonal, and yesterday and to-day have been quiet days.

*26th April.*—She is getting 20 drop doses of Donovan now every six hours. She is quieter, but is still suspicious and unreasonable, and has delusions of sight and hearing. She is sleeping and feeding well.

*2nd May.*—The question of induction of labour was raised on account of the mental condition of patient. Physically she is improved. Chloroform was administered to-day, and Dr. Oliphant, who had come on duty, on examining found the os internum admitted the tip of one finger, and with dilating it he got it to admit two. Cervix soft.

*3rd May.*—Some "show," suggestive of progressing or impending labour. She is not examined, as it excites her.

*4th May.*—She was normally delivered at 6:50 P.M. of a live child, 17 inches long, and weighing  $4\frac{1}{2}$  lb.; premature, but vigorous. She was greatly excited during delivery.

*16th May.*—To-day she has been transferred to Woodilee Asylum. A slight improvement has occurred since delivery. She sleeps well, and the movements are less. She now shows more tendency to originate conversation, but she has the same delusions. Baby is healthy.

She was discharged from asylum, completely recovered, on 13th June.

CASE II.—Mrs. L., aged 25, admitted 5th March, 1900, during the eighth month of her third pregnancy, on account of chorea.

*History.*—Patient had chorea at age of 14, of eighteen months' duration—during six weeks she was in Glasgow Royal Infirmary without improvement. She was married at the age of 20.

*First pregnancy* was normal, and between her first and second pregnancies patient had rheumatic fever. It lasted seven weeks, and ever since she has been troubled with breathlessness, palpitation, and œdema of the feet.

*Second pregnancy.*—Chorea began during theseventh month, and continued increasing in severity till full time. It ceased three hours after delivery.

*Third pregnancy, the present.*

In Christmas week, 1899, she got a fright by a man offering to strike her husband. She fainted, and on coming to, was choreic for two hours. On 2nd January, 1900, she fell and fainted, and on coming to, she was choreic, and continued so till she was admitted to the Royal Infirmary under Dr. Middleton. She continued choreic during her residence there, and was dismissed choreic on 24th February. She remained so till admitted to the Maternity Hospital on 15th March. Her heart shows signs of mitral obstruction and double aortic disease.

*20th March.*—The chorea continues, but is somewhat improved by rest in bed.

*22nd March.*—A degree of paresis of right arm and leg is noticed. Patient cannot walk without support. She complains of precordial pain.

*25th March.*—Patient was to-day put on liq. arsenicalis, 2 minims thrice daily.

*28th March.*—Patient again complains of precordial pain. Induction of labour is contemplated.

*29th March.*—Induction of labour was commenced at 1.45 P.M. Under chloroform, two bougies were introduced into the uterus, with our usual precautions to avoid sepsis, and the vagina was packed with iodoform gauze. Patient felt labour pains on coming out of the chloroform. Administration of Fowler's solution stopped.

*30th March.*—At 3.30 A.M. the bougies were expelled somewhat unexpectedly. Child was born alive; weighed 6½ lb.; 18 inches long. At visit in forenoon, choreic movements seemed to have almost ceased.

*9th April.*—Patient was dismissed to-day. Choreic movements had entirely ceased for six days. Child was well.

Patient, who had been rather dull mentally when she came in, was now bright and cheerful, though, perhaps, a little childish. Most of the time she was in hospital before delivery she slept pretty well.

Whether chorea in pregnancy has, or has not, a high mortality, which has been alleged, it certainly appears to be much more serious than chorea in the non-pregnant, and its tendency to the development of insanity adds to its gravity. Its tendency, also, to recur will give rise to anxiety regarding succeeding pregnancies, and in my second case it had occurred in a previous pregnancy.

In a case reported in a clinical lecture by Professor Tarnier, of Paris, it had occurred in youth, and recurred in three successive pregnancies. As long as pregnancy lasts, recovery cannot be expected, and after delivery the patient may recover very rapidly, as shown in my second case.

In the future I will be inclined to induce labour as soon as the child is thoroughly viable. Whether I may induce before that, would depend on the apparent gravity of symptoms (physical and mental), on the violence of movements, the amount of muscular system involved, the condition of the heart, the amount and extent of the paresis (if any), insomnia, mental disorders.

I was struck by a remark in a paper on the subject by Dr. Buist, of Dundee, in the recently published second volume of *Encyclopædia Medica*. When induction is determined on in a choreic case, he says:—"The induction should be made under anæsthesia, which may reasonably be prolonged till the completion of the delivery." To keep a patient with probably a bad rheumatic heart anæsthetised for many hours, or possibly days, seems to me to be the reverse of safe.

## II.—TWO CASES OF COMPLETE OCCLUSION OF THE OS UTERI.

By DR. ROBERT JARDINE.

Dr. Jardine read notes on these cases, a report of which will be found in the *Journal* for September, at p. 210.

## III.—"SPOON-SHAPED" DEPRESSION OF THE SKULL IN NEWLY-BORN INFANTS.

By DR. J. M. MUNRO KERR.

Dr. Kerr read notes of two cases of the above condition, where the treatment by compressing the skull in an antero-

posterior direction, one hand being over the occiput and the other over the forehead, had immediately removed the indentation.

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MEETING XV.—16TH MAY, 1900.

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*The President, DR. W. L. MUIR, in the Chair.*

GLASGOW ROYAL INFIRMARY—THE BIRTHPLACE OF ASEPTIC SURGERY: A KIRKYARD ECLOGUE.

BY DR. WILLIAM FINDLAY.

Dr. Findlay read the above poem, which was published in the *Journal* for July, 1900, at p. 1.

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REVIEWS.

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*Diseases of the Gall-Bladder and Bile-Ducts.* By A. W. MAYO ROBSON, F.R.C.S., assisted by FARQUHAR MACRAE, M.B. Second Edition. London: Baillière, Tindall & Cox. 1900.

In this edition the subject matter has been altered from the lecture to the narrative form, and the author's additional cases, numbering 135, have been included. The cases have been classified, and placed at the end of the appropriate sections of the text.

We have had to wait for nearly three years for this edition, but we are compensated for this delay by the possession of the notes of so many additional cases—bringing up the total to 305.

While perusing the volume, we have noted some points which might with advantage be revised in a future edition. And, first of all, we must condemn unreservedly Fig. 5 (p. 19). The network of black lines in the figure is most confusing, and does not convey to one's eye the anatomical relations of the parts which it is intended to demonstrate. In its present condition, it is well that the author has prefixed "perhaps" to

the sentence alluding to this diagram. We would suggest the shading of the arterial and venous branches, as is usual in anatomical text-books, and we would point out that in the legend "*vena porta*" occurs three times. Several of the figures have the appearance of having been executed from blocks that have seen better days, and they are of little value as illustrations of the various pathological conditions.

It would be well to use the same nomenclature for "*colon bacillus*" throughout the volume.

On p. 38, also, we are told that micro-organisms may invade the gall-bladder "from the blood;" while we read, on p. 41, that "their entrance from the blood has been apparently disproved."

Mr. Roper's case is quoted on p. 93 as an example of intestinal obstruction of the first variety—*i.e.*, "dependent on local peritonitis in the gall-bladder region, leading to paralysis of the intestine;" yet, on opening the abdomen, "nothing abnormal was discovered in the intestines" beyond collapse of the large bowels on the distal side of the tumour. This does not apparently agree with the conditions of the "first variety."

Adipose tumour of the gall-bladder is mentioned on p. 114 without apparent connection with the page-matter, and it is not indexed. On p. 131, the clause "the rest of the wound closed" is somewhat obscure, and errors in grammar are found on pp. 145 and 149.

Repetition is perhaps unavoidable to a certain extent, but it is somewhat too much in evidence here.

The solvent action of olive oil on gall-stones is gone into at some length, but we would have liked some opinion as to the relative solubility of the different varieties of calculi.

In spite of the defects mentioned, the work is, so far as the text is concerned, one of peculiar value, and we would recommend it not only to all surgeons, but would also advise physicians to carefully digest its contents.

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*On Neuroma and Neuro-Fibromatosis.* By ALEXIS THOMSON, F.R.C.S.Ed. Edinburgh: Turnbull & Spears. 1900.

THIS work is the outcome of the author's observations on a series of fifteen cases occurring in the Edinburgh Royal Infirmary during the past six years.

He has not observed personally any cases of true neuroma, and the section devoted to this part of the subject is based

entirely on the work of others. Of the twenty plates illustrating the text, fifteen are original; of the remaining five, three are from Smith, a fourth from Knauss, and a fifth from v. Recklinghausen. The subject matter is treated of in eight chapters, as follows:—I, Introductory: Classification of Neuromata; II, True Neuroma; III, Circumscribed Overgrowths of Connective Tissue, originating in the Peripheral Nervous System, including the so-called False Neuromata; IV-VII, Diffuse or Generalised Neuro-Fibromatosis; and VIII, Traumatic or Stump Neuromata. The volume closes with a bibliography.

In the introductory chapter the author criticises the free use, introduced by Wood and Smith, of the term "neuroma," but he allows that it is convenient to retain the name, as it indicates clinically "the most important feature of any particular tumour—viz., its seat in a nerve, irrespective altogether of its structure." He then refers to Virchow's views on the unrecognised frequency of true neuromata; but he thinks that more recent observations, by improved methods, show this pathologist to have overstated his case. Since then the inclusion of plexiform neuroma and molluscum fibrosum, and the reported cases showing the combination of neuromata with pigmentary and other lesions of the skin, has tended to complicate the subject. The author's classification (on p. 7) gives at a glance a scheme of the various forms of neuroma. It is shortly as follows:—True neuroma, composed of medullated or non-medullated fibres, along with ganglion cells. False neuroma, comprising (1) circumscribed tumours; (2) diffuse tumours (neuro-fibromatosis), under which are included "multiple neuromata," plexiform neuro-fibromata, molluscum fibrosum, elephantiasis neuromatosa, pigmentation of skin of nerve origin and "secondary malignant neuroma;" (3) traumatic or division neuromata; and (4) enlargement of nerves in leprosy, syphilis, and tuberculosis. He gives abstracts of the authenticated cases of true neuroma, five in number, and all observed by other authors.

Passing to false neuroma, he defines solitary tumours as possessing the distinctive feature of "the absence of any disease or tendency to disease in the peripheral nervous system. . . . The tumour, whatever its nature, involves a nerve which is otherwise healthy." The tumours comprising this group are composed of connective tissue originating from the endo-, peri-, and epineurium. They may be innocent or malignant, the latter being rare and belonging to the category of sarcomata.



The major portion of the work is devoted to the consideration of the various manifestations of diffuse neuro-fibromatosis, the origin of which the author confesses to be quite unknown. The histology of this condition is illustrated in several beautifully executed plates, showing the overgrowth of the endoneurial connective tissue. The perineurium usually remains unchanged, while the epineurium is, in the author's experience, "more compactly arranged and increased in amount, as compared with the normal." He has also noticed, in two cases, what he believes to be degenerative changes in the nerve fibres. The distribution of the disease is noted, and attention is drawn to the affection of the sympathetic system. The "injurious influence of trauma, especially in the form of operative interference," is mentioned, and its connection with the subsequent appearance of sarcoma.

The concluding chapter deals with "stump" neuroma, in which attention is drawn to the presence of nerve-fibres of new formation. The author looks on bacterial infection and inflammation as important influences in the production of these bulbous tumours.

The different parts of the subject are well illustrated by copious notes and tabular schemes of cases, and the excellence of the plates leaves nothing to be desired. The style is eminently readable, and we have to congratulate Mr. Thomson most heartily on the production of a work which is certain to become a classic.

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*Ninth Annual Report of the Medical Officer of Health for the County of Lanark.* By JOHN T. WILSON, M.D., D.P.H. Glasgow: Robert Anderson. 1900.

In this *Report* are chronicled the administrative acts of the Public Health Department of the County of Lanark, and of the Burgh of Biggar, for the year 1899.

After noting a reduction in the total acreage of the area under his jurisdiction to the extent of 370 acres, by an extension of the municipal boundary of the city of Glasgow, Dr. Wilson deals with the vital statistics of the county. From the number of inhabited houses, it is reckoned that the population has increased by 5,633 persons over the figure of the previous year. The birth-rate—36·7 per 1,000 of population—was lower than the average of the previous eight years, and the death-rate—17·9 per 1,000—was about the average of previous years. The zymotic death-rate was

slightly higher than the previous year, the total number of cases of all kinds of infective diseases being also higher, the latter fact being due to the more general prevalence of scarlet fever, and the former, to a higher death-toll from diarrhœa, whooping-cough, and scarlet fever. There were no deaths from small-pox nor from typhus fever. There was, however, a limited outbreak of small-pox in the parish of New Monkland, in the beginning of the year, in which eleven cases were notified. It was determined that this localised epidemic was due to infection from imported rags. Briefly, the facts are these:—

Five adult females, employed in the rag-sorting department of the Caldercruix Paper Mills, and residing in three different localities, were, within seven days, attacked with the disease. This suggested a common source of infection, which, on being sought out, pointed to this common employment. Although isolation and other preventive measures were promptly adopted, six other cases developed, all traceable to the original cases. There was no known case of small-pox in the neighbourhood; in fact, there were none nearer than Ayrshire, with which, however, careful enquiry could not establish any link of connection. There was little doubt, therefore, that the rag-sorting was the fountain of the disease. In this department were employed sixty females, whose duties were distributed in rag-sorting, dusting, and cutting, for the manufacture of paper. These rags arrive from populous centres in this country, and occasionally from places abroad. In this instance it was shown that bales of rags from Smyrna had, at that time, been dealt with at the works. Further pursuance of this clue through the Foreign Office showed that sporadic cases of small-pox then existed in Smyrna. All of those attacked recovered, notwithstanding the fact that some of them suffered from the confluent and semi-confluent forms of the disease. The relationship of infected rags to the causation of small-pox has already been well-established in former outbreaks, as in a paper mill at Cathcart, near our own doors, and in a mill in the near vicinity of Edinburgh.

This outbreak, however, affords another instance of the dangers to which workpeople who work among rags, and the community generally through them, are exposed. It appears to us that the time has arrived when greater precautions ought to be taken with respect to imported rags, at the port of entrance, and also in rag mills, in which latter the establishment of fan-ventilation for carrying away dust from the respiratory organs of the operatives, as is now commonly

employed in wool-sorting works as a preventive against anthrax, might be insisted upon by the Factory Department of the Home Office.

A milk-borne epidemic of scarlet fever is recorded from Cambuslang. In the month of August the notifications of this disease in that town suddenly rose, from seven in July, to twenty in number, and, in the last three days of August, all the cases reported were ascertained to obtain their milk-supply from the same dairy. On visiting the dairy in question, it was discovered that two of the milk-carriers, and, later, a third, were desquamating from the disease, and they were promptly removed to hospital. In addition to the outsiders who were attacked, one of the workers in the dairy and a girl who sold the milk in the shop—which was separate from the dairy—were also seized. The total number of cases in the epidemic was fifty-three. A very interesting point emerged during the enquiry. In usual epidemics of this kind, the line of infection may be tracked by the route of the milk-carriers. In this one, however, while about one half of the milk sent from the dairy to the sale-shop was delivered by these carriers, one half of the families attacked received their milk-supply direct from the dairy, and not through the medium of the milk-carriers. The difficulty of explaining this was, however, cleared up later by the discovery that one of the affected milk-carriers was practising milking on a cow just becoming “yeld,” the milk of which formed part of the dairy and the shop supply.

During the year, the County Council have been active in their prosecution of infringements of the Rivers Pollution Act. By taking action against the Commissioners of the Burgh of Motherwell, they have succeeded in obtaining a judgment against the sewage-defilement of the mid-reaches of the Clyde—which decision is intended to operate as a warning to other polluters. We are glad to be able to note a forward movement on the part of County Councils in this direction. The recent action of the Dumfries County Council, under the above Act, has resulted in the Burghs of Dumfries and Maxwelltown being compelled to purify their sewage before admission to the Nith in its tidal reaches. We cannot, however, congratulate the Lanarkshire Council on the year's work with respect to the gross pollution of streams by coal-washing products. It is not satisfactory to read that effluents from these operations, containing 1,363, 1,412, and 1,328 grains per gallon of suspended solids, are permitted to be discharged into tributary streams. In our review of the Annual Report

of the previous year, we drew attention to the very limited action which was being taken in the county in the administration of the Foods and Drugs Acts. In the Report now before us, Dr. Wilson indicates what ought to be done in this regard, and, while pointing out certain difficulties, administrative in character, he shows the need for the appointment of additional inspectors.

Due attention has also been given to the Dairies, Cowsheds, and Milkshops Order, 1899, and regulations in accordance therewith have been drafted. Dr. Wilson's suggestion that a pamphlet containing the more important provisions of the Orders of 1885, 1887, and of 1889, should be printed and circulated among those engaged in dairy operations is wise, and it is calculated to be of benefit, not only in the administration of these Orders, but also to secure benefits to the community generally.

We are glad to see that good work in the analysis of waters, &c., continues to be done in the laboratory of the Public Health Department, and we trust that soon, as the medical officer anticipates, a properly-equipped bacteriological outfit will be added. No public health department can now be said to be efficiently equipped without it.

We congratulate Dr. Wilson and his assistants on the good work they are doing.

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*Contagious Ophthalmia.* By SYDNEY STEPHENSON. Medical Monograph Series. London: Baillière, Tindall & Cox. 1900.

THE author of this little volume is probably the best British authority on diseases of the conjunctiva, and is an original investigator of a very high order. The book before us quite maintains his reputation. It is elementary, but thoroughly practical, and cannot fail to be of use to practitioners.

The ultimate classification of conjunctival inflammations will probably be a bacteriological one. Mr. Stephenson accepts largely the old nomenclature, but discusses the bacteriological causes of the various forms of disease.

In a small book critical writing is not to be expected. Still, it would have been interesting to hear what Mr. Stephenson thinks as to the germicidal effects of eye-drops and lotions. So far as our own observations go, their action is almost, if not altogether, mechanical, and sterilised water will, in the majority of cases, do quite as well as elaborate prescriptions.

*Handbook of Diseases of the Eye.* By H. R. SWANZY. Seventh Edition. London: H. K. Lewis. 1900.

THIS is one of the best text-books on ophthalmology suitable for junior students and for practitioners in the English language. One feels almost amazed that Mr. Swanzy has been able to get so much valuable and, at the same time, accurate information into so small a compass. As we have reviewed this book so often, we merely content ourself by saying that the present edition is quite equal to those that have already appeared, and that we cordially recommend it to students who are beginning their ophthalmic studies.

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*Surgery: Its Theory and Practice.* By WILLIAM JOHNSON WALSHAM, F.R.C.S. With 483 Illustrations, including 16 Skiagram Plates. Seventh Edition. London: J. & A. Churchill. 1900.

WE have pleasure in informing our readers of the appearance of the seventh edition of this well-known text-book of surgery. In its revision the author has been assisted by Mr. W. E. Spencer, F.R.C.S., Surgeon to the Westminster Hospital, with whose aid the book has been revised and brought up to date. When 33,000 copies of a book have been published it is unnecessary to criticise it in detail.

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*Contribution à l'étude des Obsessions et des Impulsions à l'Homicide et au Suicide.* Par M. le DOCTEUR GEORGES CARRIER. Paris: Aux Bureau du Progrès Médical. 1899.

THIS manual, which runs to close upon two hundred pages of print, deals with a subject which, for some considerable time past, has been engaging the close attention of alienists, anthropologists, and medico-legal experts; for, as the author puts it, among the many concurrent conditions which the mentally afflicted present, the state of possession toward and the impulses to homicide and to suicide are justly interesting and important because of the grave consequences which they entail, both from the social and medico-legal points of view.

The keynote of the mental state of such persons, according to the author, is to be found in the tendency to degeneration of mental function and will, which Morel defines as "the deviation from the normal type of humanity, or weakly

deviation from a primitive type," and which is characterised by hereditary antecedents, physical defects, or intellectual faults. This stigma or blemish, which in one or other forms is present in such cases, is an essential and permanent indication of the tendency to degeneration, and, according to Legrain, may be defined as—every congenital and permanent organic condition of which the effect is to prevent the regular accomplishment of the function corresponding to it and to destroy the biological harmony, or which prevents the species from finding the means to pursue its natural double purpose of conservation and reproduction. Physical defects, to be indicative of degeneracy, must present two necessary conditions—viz., that they are congenital, and that they are permanent; and they exhibit want of equilibrium, irregularity or asymmetry—of body, or of mind, or of both. The author declares that, in order to adequately comprehend abnormal action of an organ, one must know the normal action, and that this normality cannot be defined for acts of intelligence or for moral acts, which have no absoluteness, for they are too variable, conventional, and too dependent upon the changing moods of society, of the family, and of education, to be the object of a castiron definition. The principle by virtue of which homicide is designated a crime, and an immoral act in a civilised community, is purely conventional and contingent; consequently our judgments upon this crime as an abnormality of morality are essentially relative. Normality, therefore, is essentially something relative, and, in order to appreciate in an individual the abnormality of any given act, it is necessary to reconstruct not only his genealogy but his whole life, in order to be able to appraise it and classify it. Lack of equilibrium in the degenerate—in the intellect, the emotions, and in the will—is, therefore, the characteristic of his condition, as shown by precocity, tenacity, intensity, and repetitiveness. Impulses are most frequently bound up with persistent possessory ideas, of which they are the ending, as the act is of the thought. Possession and impulse are two phenomena of the same nature, and constitute the most perfect expression of inharmonious mental action, and can only be met with in degenerates.

Neurasthenia forms the lowest note of a scale of degeneration which, rising in pitch, ends in the condition of idiocy as its highest point. Mental instability is the necessary condition to development of possessory ideas and impulses, and may be said to be that state of tension of the cerebral centre in which a parasitic perception is installed, and which,

becoming intensified, usurps and suppresses antagonistic perceptions. This state is not attained without a struggle on the part of the individual; but the tenacious possessory idea is accompanied by a moral pain so intense that it subjugates the will, and the subject, though conscious of it but powerless, finds himself irresistibly impelled to acts which even he himself reprobates. It is this condition of conscious knowledge—of apparent lucidity—which imposes upon those not familiar with the study of such troubles, and which explains judicial and medical mistakes regarding them. The foregoing may be taken as the leading ideas of the author.

The first chapter deals exhaustively with the history of the subject, which he divides into two periods—the first, which includes the writings of Pinel, Esquirol, and their followers; and the second, those of Morel and Magnan. After analysing the prevalent beliefs of the many French, German, Italian, and English writers in both periods, and considering the nomenclatures of these conditions adopted by them, he sums up as follows:—The leading feature of the first period is the study of these conditions from the clinical standpoint only, by reason of which the names of lucid insanity, conscious insanity, and impulsive insanity were given to homicidal and suicidal impulses, and, of the second period, the study of the subject from the etiological point of view. He, however, adds a third period, which begins with the writings of Régis, Séglas, and Ballet, in which the foregoing states are characterised as evidences of neurasthenia.

The second chapter deals with the psycho-pathology of morbid impulses, in which are discussed, in turn, the etiology, their predisposing causes, the influence of heredity, incidental causes, and those inherent to the individual. Of the latter, he enumerates such physiological conditions as menstruation, pregnancy, the menopause; such moral and physical causes as depressing emotions, prolonged intellectual labour, sexual excess, and others; causes from general malnutrition, as hæmorrhages, infective diseases, child-bearing; causes from intoxication, particularly by alcohol; and, as exterior causes, moral contagion and imitation. In respect of the last-named causes, he deprecates the publication in the lay press of the harrowing details of such cases.

Symptomatology and the clinical manifestations of these conditions next receive consideration. The symptoms are grouped under three heads—viz., hereditary antecedents, physical defects, psychical defaults. Under the second group he places malformed heads, facial dystrophy, irregular and

anomalous dentition, congenital squint, congenital imperfections of speech, hermaphroditism, anorchidism, crysorchidism, and other teratological deformities; and under the third, arrest in development of the intellectual faculties, unequal development of, and want of harmony in, the equilibrium of the faculties. Such persons may be original, eccentric, of pensive imagination, with romantic tendencies, are emotional, excitable, timid, unduly self-conscious, egotistic, arrogant, with graver accompanying moral perversions; and, above all, liable to possessing fixed or dominating ideas and impulses. As illustrative of this chapter, he adduces several clinical cases, some of them of the most *bizarre* character.

The chapter on diagnosis deserves the most careful perusal in view of the medico-legal importance of the subject. While in ordinary cases, he urges, it is easy enough to demonstrate insanity, the task becomes very arduous in the case of lucid persons, who, having all the appearance of sanity, are impelled to the commission of criminal acts by possessory ideas; it is only, he adds, by a profound study of each individual case that the truth can, indeed, be established—a study not only of his hereditary weakness, his physical and mental defects, but also of what Dallemagne calls sociological defects. The chief characteristic of the criminal act is the irresistibility on the part of the perpetrator, which is, however, accompanied by lucidity of reason, an anguishing struggle against the impelling idea, and, after commission of the deed, by consequent satisfaction. In the case of the victim to homicidal impulse, all that can be said is that he labours under the dominancy of an illusion or of a hallucination, which leads to the impulse; in which case the culprit is not responsible, as in epileptics and those hypnotised.

The question of responsibility, therefore, becomes of the very highest importance medico-legally. It is one, moreover, which is compassed with difficulties, and has given rise, in the opinion of the author, to numerous judicial errors. He points out that primitive society occupied itself solely with crime, which, having committed, the culprit had broken pact with the founding principle of the society, and, therefore, deserved punishment, no matter what was his mental condition. The same was true of ancient legislations until the institution of the Roman law, which declared for the first time that a culprit was only responsible for his act if he were *compos mentis*. Then, also for the first time, arose the question in the case of any given person—When and how did he cease to be *compos mentis*? From that time up till the present the decision of



this question depended upon a variety of contingent circumstances, prejudices, and errors of all kinds, religious and political passions, and other causes, since every man was supposed to be in the possession of free will.

It was not until the works of Pinel that France was compelled to make mention, in its codified laws, of the irresponsibility of the insane, and to incorporate in Article 64 of the Penal Code the decree—"There was neither crime nor misdemeanour if the committer was in a state of unsound mind at the time of its commission." That was enacted in 1810, and it remains till this day the law of France; and, although its terms have become more elastic since its original establishment, that has only been accomplished by the labours of alienists.

There arose next the question of limited or graded responsibility, more especially in the case of monomaniacs in whom it was believed the mind was sound upon all subjects save that upon which the monomania was established. From the discussion of this there arose a school of legal and medical experts, who held that any person who knowingly committed an illegal and criminal act ought to be punishable by the law. In spite, however, of such a school, the field of irresponsibility became broadened. On this subject, Cabardé declared that it was no easier to maintain the rightness of conduct or of action of a brain tainted in its anatomical or functional integrity than for a person to hold himself erect who had a crooked spine. The author very pertinently discusses the question—Upon what reasoning could partial responsibility be rightly founded? What is meant when it is declared that a person is only partially responsible? Is it not that the accused has not a normal brain; and if so, *ipso facto*, is there not want of equilibrium in all the function of the brain—in the will, the intellect, and the emotions—and, consequently, is not the accused totally irresponsible? Besides, such a doctrine places the responsibility of determining how far the culprit is irresponsible upon a judge instead of a scientific expert.

Since the time when this subject was so keenly discussed, there have arisen two distinct schools of teaching; first, the classic criminal school, which is based upon the existence of free will and of a moral law; and, second, the school of anthropologists, which demands devoted attention to every psychophysiological phenomenon, and which rejects the doctrine of the absolute fixity of a moral law—morality being, to the exponents of this school, essentially conventional and destitute of absolute criteria. This latter school has enrolled in its

ranks such men as Lombroso, Ferrí, Garofalo in Italy, and Broca, Bordier, Lacassagne, and Manouvrier in France. According to this school, a criminal is influenced by two orders of influence—viz., intrinsic influences, or those coming from within himself, and extrinsic influences, or those influencing him from without; from which flow two kinds of responsibility—viz., individual responsibility and social responsibility, neither of which exists in the homicidal degenerate.

From these more or less academic considerations, we turn to the form of examination of an individual who may be believed to have committed a homicidal act. Says the author, there are three points to be closely observed—viz., the person to be examined, the expert who examines him, and the report of the examination. Regarding the first, only the most exhaustive investigation of the culprit with relation to the character of the crime should be entertained; often the crime is motiveless, is accompanied by complete unconsciousness, falls upon victims best beloved by the culprit, does not exhibit the atrocity of the like act of an epileptic, and is liable to be repeated.

The rôle of the examiner is not merely to record a personal impression, more or less justified, it may be, by personal experience, but to place every fact in his report in such a way that its import may be appreciated by intelligent laymen. The examiner, therefore, should be one well versed in psychological research and in the knowledge of the mentally unsound. For this reason, it is urged, the study of insanity ought to receive greater recognition in our medical schools, and every student of medicine should pass through some period of practical study of mental diseases in an asylum. Where enquiry has to be made into the responsibility of an accused person, the author urges that it should be made by several experts so well qualified that their conclusions would be beyond the shadow of a doubt; indeed, he advocates the establishment in France of a Medical Council, to be attached to the Court of Appeal, to review the conclusions of the first examiners—a tribunal which could be appealed to for advice in important medico-legal cases, such as exists in Germany. In every such case, he further urges, involving criminal punishment, it is necessary always to have, at least, two medical experts named either by the *juge d'instruction*, or, one by the criminal prosecutor and the other by the defence—a proposal which has been put forward by no less an authority than Brouardel.

In the concluding chapter of the book the author deals with the prevention of such cases, and the treatment of the mentally defective. The duty of a community in these regards is partly preventive and partly helpful. The preventive measures which he advocates may be summed up as follows:—Prevention of the causes of degeneracy from birth onwards, especially those arising from intoxication by alcohol or other deliriant intoxicant, as opium, haschish, or tobacco, and from malaria, epidemics, and alimentary poisons, such as pellagra and ergotism.

Probably much might be done by the regulated education of children who indicate criminal tendencies, either in houses of correction or in agricultural settlements; and in the case of declared suicidal or homicidal mania, society must interfere to prevent these unfortunates either doing injury to themselves or violence to others, by separating them from the community under watchful and skilled care.

We commend this book to all who are engaged in the treatment of the insane, or who are interested in the medico-legal issues which are involved.

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## ABSTRACTS FROM CURRENT MEDICAL LITERATURE.

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### NERVOUS DISEASES AND INSANITY.

By DR. R. S. STEWART.

**A New Method in Brain Study. Rampancy, the Fervour of the Forehead.** By Wallace Wood (*New York Medical Journal*, 1899 and 1900).—Boldness of imagination and floridity of style are the characteristics of these two reprints. From the examination of a large number of brains prepared by the dry method, the author derives the conclusion that there is in the convolutionary architecture an emblematical representation of the appropriate functions. On the surface of the cat's brain there is, for example, a sculptured representation of an ear, and this particular part is found to correspond to the auditory centre. So also is it with all the other areas of the cerebral surface. There is even to be found an emblematical representation of the most highly developed human faculties in the related regions of the cortex. "Compare body and mind. Take body first. This good force and good feeling, this fire and tenderness, this noble heart elation, yearning for attachment, generous giving, kindled in the vernal centres of life, surges through the organism and ramps in the neck, head, breast, and shoulders, and rapture-quivering wings of all the happy creatures. The wave passes from pole to pole. The same holds good in the brain. There the fire

and tenderness, the heart-yearning and self-giving desires are kindled in the maternal and paternal focus in the backhead, while the divine force and good feeling, the heart, the tenderness, the love, the kindliness, the unutterable longing for the infinite unknown, or the ideal, rise to a crest in the spiritual focus of the metopon." The occiput is a sculptural flower; in the forehead the brain ramps heavenward or onward like the curve of a stamen.

**Repose in Bed in the Treatment of the Acute Forms of Mental Diseases.** By Korsakov (*Archives de Neurologie*, October, 1900).—The writer's views on this subject are very reasonable and eminently practical. The therapeutic effect of rest in bed is, he says, incontestable. Certain grave forms of mental disease, such as acute delirium and febrile delirium tremens, have become under this *regime* almost non-fatal, other forms with maniacal excitement follow a much more tranquil course, cases of suicide in melancholia have become rarer, and there is more conservation of the vital forces of the exhausted. Hence its use is indicated in the greater part of the excited cases, particularly in the purely maniacal, in febrile and exhausted patients, in melancholiacs, and in almost all cases affected with the acute psychoses in the initial period. Rigorous individualisation is insisted upon in carrying out the system.

**Morbid Anatomy and Pathology of General Paralysis.** By Orr and Cowan (*Journal of Mental Science*, October, 1900).—From a systematic examination of twenty-three cases, these writers conclude that the nerve-cells of certain individuals are liable to a premature decay, which decay may be precipitated and intensified by certain exciting causes, such as alcohol, syphilis, influenza, lead poisoning, and the like. There is no pathological evidence at present to ascribe to any one of these a predominating influence in the determination of the onset of the disease, with the single exception of that form which is associated with true tabes. In this disease there is both clinical and pathological evidence that syphilis is by far the most frequent antecedent and probable exciting cause.

**The Cortical Nerve Cells in General Paralysis.** By Watson (*Journal of Mental Science*, October, 1900).—The primary condition, according to this observer, as regards the cells in general paralysis, is a slow atrophic degeneration. In some cases, especially those in which seizures have occurred, there is an active destruction of cells in certain areas.

**Physical Changes in Melancholia.** By Bruce and Alexander (*Journal of Mental Science*, October, 1900).—The majority of recent cases of melancholia, these writers believe, pass through two stages. In the first or acute stage there are great depression and restlessness, high arterial pressure, slight fever, scanty and albuminous urine, digestive debility, weak motor power, and dryness of skin. In the second or subacute stage the mental symptoms subside, the arterial pressure falls, temperature is normal, the urine and digestive functions become normal, and the skin becomes moist. These conditions indicate certain lines of treatment.

The following are some of the subjects which came up for discussion at the Thirteenth International Congress of Medicine held in Paris in August, 1900, and appear in the *résumés* of the reports of the Sections of Neurology and Psychiatry:—

**The Nature of the Tendon Reflexes.**—Jendrassik holds these to be true reflex movements whose path leads directly across the grey substance of the cord at the level of the second and fourth lumbar roots, that they are the result of a sudden, mechanical, momentary excitation of the sensory nerves of the tissues surrounding the tendon, and not of vibration transmitted from the tendon to the muscle. They may be identified with the other reflex

movements. The ordinary cutaneous reflexes are reflexes whose arc rises as high as the brain, probably even as far as the cortex, and those which are observed in myelitic paraplegias are pathological, and result from a sort of switching of the nerve current, which is prevented from finding its way to the brain, or from an increased excitability of the nervous elements separated from the superior centres. Muscular tonus has a large influence on the tendon reflexes; when it is increased the reflex is lively; its lowering may lead to their abolition. It is very probable that the lowering of muscular tonus is the cause of the abolition in tabes. Abolition is exceptional in cases of disease of the brain, and may be caused by nervous shock or secondary lesion of the cord. The occasional abolition in cerebellar disease is rather a general symptom due to consecutive hydromyelia or to rigid contracture of the muscles.

Sherrington recognises in these two sets of phenomena, true spinal and cerebro-spinal, and pseudo reflexes or jerks. These latter are a direct response by the muscle to sudden mechanical strain, and their production is dependent upon the maintenance of the spinal tonus of the muscle.

**The Non-Tabetic Lesions of the Posterior Columns of the Cord.**—A description of the localisation and nature of the sclerosis in various diseases is given by Bruce. In progressive muscular atrophy the columns of Burdach and Lissauer's tract are involved, and, to a lesser extent, the columns of Goll. The degenerations frequently noted in cerebral tumour are probably due to ascending degeneration of one or more roots produced by accumulation of cerebro-spinal fluid or by the action of toxins. In Friedreich's ataxia the lesion is a sclerosis of the posterior and antero-lateral columns, and the appearances suggest primarily an imperfect development of the sensory neuron, with subsequent degeneration and secondary increase of neuroglia. In the combined sclerosis of posterior and antero-lateral columns, under which term are included several groups of diseases, the changes are not accurately limited to definite systems. These changes are found in pellagra, ataxic paraplegia, and in pernicious anæmia.

Dana discusses the subject of acute spinal ataxia due to bulbar lesions, and also a distinct class of cases in which acute lesions of the posterior columns occur in elderly people with, generally, a specific history, and the lesions due to cachectic, anæmic, and infectious states.

In relation to their origin, Homen classifies the alterations of the posterior columns into those which are directly provoked by neuritis, due sometimes to purely anatomical alterations from the nerves, comparable to those arising consecutively to amputations or resections of nerves, sometimes to the noxious agents present in the nerves; second, those in which the process provoked by the injuring agent declares itself in the intra-medullary region and the periphery at one and the same time; third, those quite independent of the neurons and associated intimately with the vessels.

**The Psychoses of Puberty.**—Marro points out that there is among the psychoses which occur at puberty, one form which may be regarded as specific—viz., hebephrenia, and he thinks that this may be traced to an auto-intoxication arising from troubles of the digestive tract.

According to Voisin, all varieties of psychoses may show themselves at puberty, and he does not regard hebephrenia as a morbid entity. The predominant cause is hereditary predisposition associated with incomplete intellectual development, and recovery takes place in one-half of the cases. The precocious dementia usually described as hebephrenia presents itself under two forms, the grave one offering the symptoms of stupor, dementia, catatonia or mental confusion, the slighter one taking the form of simple dementia, which has to be distinguished from that of general paralysis and epilepsy.

Ziehen is of opinion that all the known psychoses are to be found at this period, but that a special influence of puberty shows itself only in this, that certain psychoses prevail greatly at this period, and that often, nearly always, these undergo certain modifications as regards symptoms and course.

## SURGERY.

By G. H. EDINGTON, M.D.

**Dermo-Lipoma of the Conjunctiva.**—A lad, aged 17, came under the care of M. Aurand with a small tumour on the bulbar conjunctiva of the left eye. The patient had only observed it for three years, but his parents stated that it had existed since birth, although of less size. There were no other malformations. He sought treatment on account of the annoyance caused by hair sprouting from the swelling. The hair had been extracted on one occasion, but had grown again.

The tumour, which was the size of a pea, was situated in the external equatorial region, and, with the eyes in the position of direct vision, it was in great part hidden by the external commissure. It was of greyish-red colour, with a slightly yellowish point on its convexity. It was movable on the globe, but adhered to the conjunctiva. Implanted on the tumour were two black hairs as long as eyelashes.

Its congenital origin, its augmentation in size at puberty, the presence of hairs, and its position, place it among the "dermoids," although the usual seat of dermoids is the limbus of the cornea. Its yellowish point and soft consistence justify its being called a "dermo-lipoma." The consistence of dermoids approaches that of the lipomata according to their proximity to the fornix.—(*Lyon Médical*, 11th March, 1900, p. 339.)

**Acute Suppurating Psoitis treated by Trepanning the Pelvis.**—A woman, aged 39, admitted 6th September, 1899, suffering from a post-puerperal psoas abscess on the right side. Fifteen days later pain was complained of on the outer side of the thigh, followed by flexion and outward rotation of the hip. Swelling on outer side of thigh was opened, and 2 litres of stinking pus evacuated. The ilium was trepanned in middle point of a line between anterior and posterior superior iliac spines; also an anterior incision 10 cm. below the "arcade of Fallopius." Both wounds were drained. Phlebitis ensued, followed by death on 29th November. The author remarks on the advantages of drainage through the ilium. Subsequent fixation is necessary, and syringing is to be avoided if the iliac vessels are in the wall of the cavity, in case of thrombosis.—(*Gayet, Lyon Médical*, 4th March, 1900, p. 295.)

**Inguinal Colotomy.**—The principles of Montgomery's method of performing colotomy are as follows:—

1. Determine upper and lower ends of loop. When the sigmoid loop is in normal position, the floating set of epiploic appendages is on the right side.

2. The loop is to be twisted on its mesenteric axis, so that the floating appendages come to lie to the left; by this means the lower part of the loop is the acting one, and by thus avoiding pressure from above on the wound, the tendency to hernial protrusion is lessened. The twisting also results in firm adhesion between the limbs of the loop, which further tends to diminish the liability to prolapse.

3. Formation of a good spur, and constriction of the rectal end of the loop.

4. Fix the loop as low down in the sigmoid as possible, so as to utilise to its fullest possible extent the function of the colon. For this purpose the abdominal incision should be lower than usual, and the loop drawn up and twisted. A strong suture is passed from one lip of the wound to the other, transfixing the mesentery *en route*. This suture when drawn tight kinks the rectal end of the loop.

Bowel is to be opened in twenty-four to thirty-six hours. This method cannot be used in cases where (1) distension is marked; (2) cancer involves sigmoid mesentery; and (3) where mesentery is congenitally short.—(*Montgomery, Medical Chronicle*, March, 1900, p. 407.)

**Prelaryngeal Cold Abscess, of Glandular Origin.**—One or two lymphatic glands are situated in front of the crico-thyroid membrane in a great number of subjects. These receive some of the subglottic lymphatics which traverse the membrane, and thus is explained suppuration in this region without lesion of the cartilages or their perichondrium. These abscesses are rare.

Lad, aged 18 years, had observed, about two months before he entered the hospital, a slight swelling in front of neck. This swelling was movable, increased in size slowly, and was not painful. For some days it had increased rapidly, but it was still quite indolent. When seen by Morestin it was size of small orange, extended above to superior border of thyroid, below to a little beyond cricoid, and laterally to the anterior borders of the sternomastoids. The skin was softened, and about to ulcerate. The swelling followed laryngeal movements. At the angle of the jaw was a cold abscess, and this aided in the diagnosis of the prelaryngeal condition.

The patient had suffered from a catarrh before the swelling had appeared; the bacilli had evidently passed through the mucous membrane, and got caught in the gland.

The swelling proved to be a cold abscess; the anterior wall was excised and the posterior scraped.

A guinea-pig was inoculated with the pus, and developed tuberculosis.

He reports also a second case occurring in a man, aged 50, in whom the lung was tuberculous.—(Morestin, *Gaz. des Hôpitaux*, 18th October, 1900.)

**Two Cases of Mammary Tuberculosis.**—1. This case illustrated what is considered a very rare form of the disease—viz., the presence of multiple and disseminated foci.

Woman, aged 30 years, was seen in August, 1899, with a tumour in the right breast. She was thin and enjoyed moderate health. During her last pregnancy (November, 1898) she had a right-sided pleurisy. The effusion was absorbed rapidly, but adhesions were formed, as shown by frequently recurring intercostal pain. She had no cough. She suckled the first only of her four children; milk was scanty, and breasts were always of moderate size. She had never had any ailment connected with lactation. Six months after her last confinement (i.e., June, 1899) she observed a hard nodule in the substance of the right breast, but she let several weeks pass without speaking about it. Ultimately a dragging sensation in breast and axilla, lancinating pain, and stiffness (*gêne*) were sufficient to disturb her without causing her to suffer much. She then drew attention to her condition. The left breast was normal. The right was not augmented, nor was it modified in appearance. The nipple was slightly retracted in its upper half, but could be drawn out. There was a rounded ovoid swelling in inner part of breast, not fixed to skin or parts below. The swelling appeared circumscribed, like an enucleable tumour. Consistence was firm, but fluctuation was made out. There was no tenderness. In addition, the gland contained several smaller tumours, varying in size from a hazel-nut to that of a pea. Two of the largest were in the outer side, and one of them was fluctuant. They were mobile in surrounding tissues. Around these two were numerous smaller bodies like hard grains. From the nipple to the axilla extended a sort of indistinct cord, following partly the pectoralis margin. In the antero-internal part of the axilla was a mass of enlarged glands. She had never noticed any discharge from the nipple, but pressure on the breast, and especially over the inner tumour, caused the escape of small quantity of yellowish pus, and the swelling yielded same kind of fluid on aspiration.

The case, while unlike the ordinary picture of tuberculosis, was one of chronic non-puerperal suppuration. It was unlike an old abscess simulating carcinoma. It was hoped to have saved the skin, but the gland was full of caseous nodules, mostly softened and broken down, and, in September, 1899, the breast was removed and the axillary glands cleared out.

The wound remains well, but the general state is not good, although no definite lesion has appeared in any organ.

From pus in syringe, cultures of staphylococcus aureus and albus were made, while cover-glass preparations of the pus showed bacilli undoubtedly present, though scanty. Two guinea-pigs were inoculated with (a) pus from abscess and (b) from gland in axilla. Both developed tuberculosis. Histologically, the lesions were found to affect the glandular structure or its neighbourhood.

*Note.*—The slight enlargement of axillary glands was unusual, and was perhaps due to the slight implication of the connective-tissue.

2. Girl, aged 15 years, presented sinuses in outer half of breast. Microscopically, the connective-tissue was affected.

There had been primary gland-abscesses in the axilla; the lymph had thus been sent back towards the breast, which had then become secondarily infected.

*Treatment.*—In disseminated form, complete removal; in confluent variety, partial removal may be practised. The glands in axilla give no index, as they may be the primary seat of disease; or, if secondarily affected, they may be very small even when the breast is much diseased.—(H. Morestin, *Gaz. des Hôpitaux*, 1st March, 1900.)

**Mammary Tuberculosis.**—Carle has communicated three new cases, which could not all be considered primary. In its clinical bearing, he lays stress on the fact that the axillary glands are often affected before the mammary, and that there is often cicatricial contraction of the nipple before any fistulæ have formed. Histologically, the microscopic sections were of value as proving that the disease in the mamma was of connective-tissue origin.—(*Gaz. Hebdom. de Méd. et Chir.*, September, 1899; abstracted in *Centralbl. für Chir.*, No. 39, 29th September, 1900.)

**Congenital Ectopia of the Kidney, from the Surgical Point of View.**—This condition is much more frequent on the left side. The misplaced organ is not of reniform shape, lies generally in the venter ilii, and more rarely in the inferior lumbar region. It has usually a very rich blood-supply, receiving many vessels from the nearest trunks. Lobulation is often present, and the condition is frequently accompanied by other anomalies. It may only be discovered *post-mortem*, or it may be a cause of deterioration of health.

Diagnosis is very difficult; abdominal section will remove any doubts.

*Treatment.*—Freeing (*décollement*), followed by fixation, may do good, but nephrectomy may have to be done.—(Nurdin, *Thèse de Lyon*, 1900; *Lyon Méd.*, 4th March, 1900, p. 311.)

**The Reefing Operation for Movable Kidney.**—E. W. Andrews, of Chicago, describes the following operation:—

1. Incision at outer border of quadratus, from twelfth rib to ilium, down to loose fat about kidney.

2. Fatty capsule and its enclosing fascia (Gerota's) is split the whole length of the kidney. The two flaps so formed are pulled outside, care being taken that lower pouch of capsule is pulled well up. The kidney can be seen in wound, moving with respiration, and probably 1 inch lower than normal position. This is of advantage, as it removes upper pole from pressure of liver.

3. Flaps are held outside, and opening in muscular wall is closed by a line of mattress-sutures which transfix fatty capsule.

4. Flaps are cut off an inch or two outside the muscle, everted, and stitched down, and skin wound is then closed.

The real support is obtained not by stitches but by compression between muscles. The interposed fascia has not been found to cause failure of union in any case. The method has been tested for from one to thirteen months. Results are fair.—(*Journ. Amer. Med. Assoc.*, 6th October, 1900.)

**New Method of Fixation of Movable Kidney.**—After insinuating



on the inconveniences of the different methods of nephrorrhaphy, Biondi (of Sienne) describes his own procedure. Having reached the kidney, he places it in position, and fixes it with a long band of gauze which he applies in front of the organ. He shuts in this gauze, making it describe numerous zigzags from without inwards and *vice versa*, and brings the end of it out at inferior angle of the wound. This packing does not present any drawback; it is removed seven or eight days later, and the kidney is then seen to be firmly fixed. Thus he does away with the inconvenience of suspension from a rib, of resection of rib, and of sutures. Further, the operation is rapidly performed, and cure is obtained at the end of twenty days. Biondi has performed this operation thirteen times, on each occasion with successful results.

He considers that it fulfils the conditions of a good nephrorrhaphy—viz., rapid operation, without danger; firm fixation in the normal position; flow of normal urine; no alteration of renal tissue.—(*Rev. de Chirurgie*, September, 1900; abstract in *Annales des Mal. des Organes Génito-Urinaires*, October, 1900.)

**Congenital Cysts of the Perineal Raphé, and Urinary Pouches.**—In the course of a lengthy paper on peri-urethral inflammations, by Tedenat (*Nouveau Montpellier Méd.*, No. 32, 1899), this author mentions, as of very rare occurrence, a congenital cyst of the raphé having a communication with the urethra as a sequel to urinary abscess in a case of stricture.

The patient, aged 33 years, had suffered from gonorrhoeal stricture, which had been treated by the passage of small sounds from time to time. Perineal abscess formed, and was succeeded by two narrow fistulous tracts occupying the left side of the raphé. They were connected by a hard cylindrical cord, with a rounded swelling 4 or 5 cm. in diameter, which extended deeply behind and above. Pressure on this swelling caused discharge of reddish urine. External urethrotomy was performed. A tract, 1 cm. long, admitting a fine stylet, led from the urethra into the cystic pouch, which was removed without opening; a narrow pedicle sprang from its postero-superior part, and coursed for a distance of more than 3 cm. towards the rectum, without, however, reaching that viscus. The pedicle was cut, urethral gap sutured, and, despite a small fistula lasting for eight or ten days, the patient recovered with a supple urethra admitting No. 27 of Charière.

The cystic pouch had a fibrous wall, with few disseminated striated fibres; its inner surface was paved with flat epithelium, very sharply defined.

The thickness and special organisation of their walls enable these cysts the more to withstand the action of urine or pus, and so explain the great rarity of urinary pouches of this origin.—(*Annales des Mal. des Organes Génito-Urinaires*, June, 1900, p. 640.)

**Acute Articular Rheumatism and Trauma.**—A housewife, aged 25 years, fell off a pair of steps on to her right side and knee. She continued working for the rest of the day. During the night she suffered intense pain in knee and in right shoulder, and developed the signs of acute articular rheumatism. After four months' treatment in hospital, she was discharged with knee stiff. Wolff connects the rheumatic attack with the accident, and comments on the short interval between them.—(*Centralbl. für Chir.*, No. 39, 29th September, 1900.)

**Articular Rheumatism after Trauma.**—Becker records history of two cases:—

1. Woman, aged 59. History of articular rheumatism for years; also heart lesion. In immediate sequel to a sprain of left ankle-joint, she was laid up with acute rheumatism. After she had recovered, she carried on for some weeks her former occupation, when she had a return of the rheumatism, this time, however, without any participation on the part of the ankle. Becker cannot perceive any causal connection between the last recurrence and the sprain.

2. A polisher, aged 40, already on two occasions afflicted with articular rheumatism, received a twist of right shoulder-joint. Six months later he suffered again from rheumatism, at which time there was transitory aggravation of shoulder-joint condition.

Becker is of opinion that there is a possible causal connection between the accident and this recurrence of rheumatism.—(*Centralbl. für Chir.*, No. 39, 29th September, 1900.)

**Peliosis Rheumatica and Trauma.**—Woman, aged 50 years, fell on the front of her left knee. Immediate pain and swelling. Limited function remained. Some months later she suffered from suppurations in hand and fore-arm. After some ten months, blood-spots appeared spontaneously in the skin of both legs. The spots increased in intensity with time. Mayer considers it probable that the peliosis is related to the trauma of the knee.—(*Centralbl. für Chir.*, No. 39, 29th September, 1900.)

**Carbolic Gangrene.**—Harrington (*Amer. Jour. of Med. Sc.*, July, 1900) has, in the last five years, seen 18 cases of carbolic gangrene of the finger, and he has collected from the literature 132 cases. In all of these watery solution (1 to 5 per cent) was used as a poultice; in most cases amputation of the part so treated was found necessary. He claims, as the result of these experiences, that carbolic lotions should be dispensed only on prescription.—(*Centralblatt für Chir.*, No. 40, 6th October, 1900.)

**Gonorrhœa complicated by Pyæmia.**—A workman, aged 33 years, developed a gonorrhœa without unusual features. After three weeks he came into the hospital, with four days' retention of urine. He had fever, and pains in the joints of the extremities. Urine muddy, contained many pus-cells and gonococci. After two days death from cardiac weakness.

*Post-mortem.*—Purulent gangrenous prostatitis; purulent cystitis; hæmorrhages in pericardium, pleura, renal calices, and bladder; abscesses in lungs and kidneys; sero-purulent synovitis; fatty degeneration of heart-muscle.

Korolenko explains the case thus:—Purulent inflammation attacked the bladder, prostate, and veins of plexus of Santorini, and led on to pyæmia. Gonococci were found only in the prostate. From the joint exudations a very fine staphylococcus was cultivated, which liquefied gelatine. There was thus a mixed infection. Cultures from blood and pericardial fluid were negative.—(*Centralblatt für Chir.*, No. 40, 6th October, 1900.)

**Two Cases of Gonorrhœal Arthritis in Children.**—1. Girl, aged 7 years, had suffered from vulvo-vaginitis for one month, and the sternoclavicular joint presented the appearances of purulent affection. Healing took place spontaneously in one month.

2. Girl, aged 5 years, had suffered from vulvo-vaginitis since three (?) years. Within eight days well-marked abduction and flexion-contraction developed in right thigh, with slight swelling of the hip region and of the inguinal glands. Extreme pain, but no fever. The diagnosis of gonorrhœal coxitis was confirmed by the absence of premonitory lameness and of knee-pain. Beyond the local treatment of gonorrhœa, poultices only were used. After eight days the patient could straighten out the limb, and cure was complete in eight weeks.—(Halle, *Centralblatt für Chir.*, No. 40, 6th October, 1900.)

**Tubercular Degeneration of Patent Urachus in an Adult.** Briddon and Eliot (*Med. and Chir. Rep. of the Presbyt. Hosp.*, New York, January, 1900) report the following case:—

A woman, aged 19, without tuberculous taint, had enjoyed good health till five weeks before her admission to hospital. At that time she developed signs of inflammation at the previously healthy navel. With increase of the symptoms a red tumour of the size of a bean formed in two weeks. During this time continuous pricking pain in the hypogastrium appeared, along with

bladder-tenesmus and two-hourly micturition. At the end of two weeks the tumour burst spontaneously with the escape of muddy, urinous, stinking fluid, and with relief of the pain. From this time on no urine passed by the urethra, but only through the umbilical fistula. The general state was rapidly restored.

Beyond anæmic cardiac bruit nothing abnormal was found in the internal organs. At the umbilicus was a fistula with ulcerating margins; through this came sero-purulent urinous fluid. A sound introduced into the fistula passed downwards to the bladder. The bladder region was tender on pressure. Urine strongly alkaline; specific gravity, 1014; 15 per cent sediment; foul, ammoniacal odour; 10 per cent albumen; no blood; plentiful mucus; blood and bladder cells; triple phosphate crystals; no tube-casts.

Washing out with various antiseptic lotions, and the internal administration of salol, were without result. Injection of tuberculin gave a positive reaction. Suprapubic section was performed by Eliot on 26th August, 1899, with the object of draining the bladder. A patent urachus was found, and several small ulcers on posterior wall of bladder, from which pieces were taken for microscopic examination. No characteristic appearances of tuberculosis were found in these. After treating the remaining ulcer with the thermo-cautery, a strip of iodoform gauze was pushed through the urachus, and the bladder was provided with siphon-drainage.

After the cystitis and the general state had been somewhat improved by the continuous drainage, extirpation of the urachus was carried out by Briddon without opening the thickened peritoneum. Primary healing resulted.

Microscopic examination of the urachus showed tuberculosis. The bladder fistula closed, and normal micturition was resumed. The urine still contained a little mucus and pus, and albumen to 3 per cent.

Eliot is of opinion that the open urachus was the seat of primary tuberculosis, and that from it followed the infection of the bladder.—(*Centralblatt für Chir.*, No. 40, 6th October, 1900.)

**Suture of Arteries which have been cut across completely.**—Bouglé, in an interesting paper on the subject, criticises various methods already published, and describes his own procedures:—

1. Perforating sutures should not be used, on account of the danger of clotting being so produced. He passes longitudinal, U-shaped sutures in the thickness of the wall of the proximal portion of the vessel, so that the ends hang free at the end of the vessel. The proximal is then invaginated into the distal end, and the free ends of the sutures are passed from within outwards through the entire wall of the ensheathing distal part of vessel.

2. End-to-end suture, the sutures passing through outer part of wall and including sheath.

He cut across the left carotid of a dog, and treated it by method 1. On the same dog, and on the same day, he repeated the section on the right side, suturing by method 2. Fifteen days later the dog was anæsthetised, and the cicatrices opened up. On sectioning the right artery distal to seat of operation, blood escaped in jets as from normal vessel. The parts were resected, and the ends sutured. The left artery was also found firmly united, with lumen patent.

The vessel which had been treated by the method of invagination showed some prominence of intima at seat of operation, which contrasted with appearances in end-to-end operation.

The specimens which were shown to the Society prove that total transverse suture of arteries is possible, and relatively easily performed. Further experience is required, however, with regard to the question of the operation producing ultimately aneurysm.

Bouglé quotes a case of Murphy's in which the femoral artery had been sutured, with good result, in a man.

Morestin spoke on Bouglé's communication. He had never been able to produce aneurysm in dogs' arteries, although he had wounded the vessel

experimentally for that purpose. We had to remember that individual differences would play a part in the formation of aneurysm. A contra-indication to the operation would be the existence of atheroma.

M. Bouglé gives the bibliography of the subject, and the paper is illustrated with diagrams of his own and other methods.—(*Bull. et Mém. de la Soc. Anat. de Paris.*, August, 1900, pp. 764 *et seq.*)

## GYNÆCOLOGY AND OBSTETRICS.

By E. H. LAWRENCE OLIPHANT, M.D.

THE *New York Medical Journal*, in the number for 18th August *et seq.*, gives a series of abstracts of papers read before the International Medical Congress in Paris. "The Etiology and Nature of Puerperal Sepsis" is the title of a report by M. Doléris. He maintains that the pathogenic organisms which usually cause puerperal septicæmia are streptococcus pyogenes, staphylococcus aureus, gonococcus, bacterium coli commune, to which recent researches among the anaerobes have added the bacillus putridus and some others. From this it is concluded that certain anaerobic saprophytes may develop and act as veritable pathogens, especially in retention of the placenta. The concurrence of various kinds tends more surely to infection. Death results from toxæmia, or, in subacute peritonitis, from nervous inhibition or intestinal obstruction. The staphylococcus may kill by metastases to the pericardium, pleura, kidney, &c. The demonstration of the pathogenic action of certain putrefactive saprophytes leads to the discussion of autogenetic infection. Autogenesis has recently received a special interpretation, whereby pathogens pre-existent in pathological vagino-uterine secretions must not be considered as saprophytes; and as the term "autogenetic infection" can be properly applied only to that dependent upon saprophytes, it follows that its existence must be disputed. But that is only one interpretation. The clinician is forced to admit the revivification *in situ* of the pathogens pre-existing in the uterine neck and the tubes, and the possibility of the generalisation of such an infection after labour without the fresh access of pathogenic microbes from outside.

Under the same title, Drs. Menge and Krönig read a paper in which to M. Doléris' list of organisms they add the bacillus diphtheriæ and the diplococcus pneumoniæ, as also certain bacteria which necessarily develop without oxygen, but are not yet known as regards their biological properties. Puerperal infection with these bacteria may be heterogenous or autogenous. By autogenous infection they mean an infection with pathogenic bacteria which have existed previous to the labour in a saprophytic state on the external genitals or in the genital tract of the woman, and during, or immediately after, labour invade the organism by the puerperal route, and injure it. By heterogenous infection they mean infection with pathogenic microbes carried in the air, or by the attendant's hands or instruments, to the genital tract. They do not include gonorrhæal puerperal fever among autogenous infection, because the saprophytic character of the infective agent does not exist—it is simply an extension of a pre-existing infectious process. The streptococcus pyogenes puerperalis, staphylococcus pyogenes aureus, bacterium coli commune, Neisser's gonococcus, bacillus diphtheriæ, and diplococcus pneumoniæ do not exist in saprophytic state in the vaginal secretions of pregnant women, and so cannot cause an autogenetic infection. Such an autogenous infection from anaerobic bacteria in the vaginal secretion is improbable, but possible. The authors, from their clinical experience, consider as rare and as of favourable prognosis an autogenous puerperal infection by pathogenic bacteria which have existed as saprophytes upon the skin of the external genitals.

Pathogenic bacteria from the skin of the external genitals may penetrate after the labour into the cavity of the puerperal uterus. The cervical canal, uterine cavity, or tubes never contain organisms in a saprophytic state. Among the factors of the infection it is necessary to consider not only the virulence but the dose of the poison, and from this point of view the air which is poor in germs hardly plays a part in heterogeneous infection. The hands or the attendants become the essential carriers of infection. As regards the virulence of the poison, it is difficult to determine the toxic power of the bacteria, but, in general, we may say from experience that the virulence is lowered when the bacterium in question has been compelled to live for a long time in a saprophytic condition.

General predisposition to puerperal infection apart, a local predisposition seems to exist in the case of insufficient hæmostasis in the genital tract, or in the case of extended lesions of the genital organs. The primitive infective focus may be situate in wounds of the perineum, vagina, cervix, or in the entire endometrium, to remain localised there, or to extend by continued or by metastatic infection. This extension is produced most often when the endometrium and the placental site are infected; more rarely the infection starts from infected wounds of the cervix; most rarely of all from infected wounds of the vagina and perineum. The blood-vessels and lymphatics are nearly in equal proportion the channels of entrance of the poison. The streptococcus pyogenes puerperalis has the greatest tendency to overstep the limits of the primitive focus; nevertheless, the greater number of cases of infection by the streptococcus are limited to the endometrium, and cure themselves.

**The Remote Results and Indications for Vaginal Ligation of the Uterine Arteries in Cases of Uterine Myoma.**—Dr. Sigmund Gottschalk, of Berlin, read a paper on this subject before the surgical section. Vaginal ligation of the uterine arteries in their different branches from the uterus to the point of division was an operation, he said, entirely devoid of danger. It was preferable to ligate in three or four stages—after freeing of the bladder, the cervix, and the broad ligaments on each side, the ligamentum cardinale, and the base of the broad ligament—with strong silk in a Deschamps's needle. This operation was well borne by exhausted and exsanguine women who would assuredly succumb to radical intervention. After the operation the uterus and tumour could receive no more blood, except from the internal spermatic artery and by the vessels of the round ligament, which last might be ligatured *en masse* in the inguinal canal. The nutrition of the uterus was assured after the operation. The vaginal ligation of the uterine arteries, in suitable cases, could subdue better than any other palliative means the hæmorrhages of myomata, and reduce the tumour to nuclei so small that they were no longer clinically recognisable. The cases must be selected for operation. The myomata most amenable to this treatment were essentially interstitial, developed in the middle and lower portions of the uterus, rather than those at the fundus. Intraligamentary tumours were inadmissible. The nearer the menopause the more chance there was of the patient being radically cured. The tumour should not exceed a woman's head in size. If there had been previous peritonitis, the tumour had probably acquired vascular connections in the abdomen, especially with the epiploën; these would render success doubtful. Submucous myomata should be extirpated.

**On Forcible Pressure of the Uterine Arteries in Fibroma.**—M. Goullioud, of Lyons, read a paper before the gynæcological section. He recommended this operation where hysterectomy was not indicated. He also chose his cases among women near the menopause, in women suffering from hæmorrhage from fibromata confined to the pelvis or not reaching to the umbilicus. The results were similar to those seen after ligation. There was always a complete arrest of hæmorrhage, and a retrocession of the tumour clearly proved by a diminution of the uterine measurements. Cases in support

were quoted. The operation had the same circular incision as for vaginal hysterectomy, with prolongations into the lateral *cul-de-sac*; the bladder in front and the rectum and posterior peritoneum upon the uterine walls were disengaged by the finger so as to isolate the hypogastric sheath. This latter being freed, the vascular layer was seized with a long, straight forceps to the extent of five centimetres, and grasped for from five to six centimetres so as to surely enclose the uterine arteries. The forceps was left in position for from twenty-four to forty-eight hours. The chief merit of this method over ligature was greater facility of execution. In one case of a tumour reaching to the umbilicus the hæmorrhage was arrested, though no diminution occurred in the uterine measurement. This operation was also useful in obstinate hæmorrhagic metritis.

### *Books, Pamphlets, &c., Received.*

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- On the Use of Massage and Early Passive Movements in Recent Fractures, and the Treatment of Internal Derangements of the Knee-joint, by William H. Bennett, F.R.C.S. With Twelve Illustrations. London: Longmans, Green & Co. 1900. (4s. 6d.)
- The Present Position of the Treatment of Simple Fractures of the Limbs, by William H. Bennett, F.R.C.S.; to which is appended a Summary of the Opinions and Practice of about 300 Surgeons. London: Longmans, Green & Co. 1900. (2s. 6d.)
- What a Young Husband ought to Know, by Sylvanus Stall, D.D. London: The Vir Publishing Co. 1900. (4s. net.)
- Transactions of the Edinburgh Obstetrical Society. Vol. XXV, Session 1899-1900. Edinburgh: Oliver & Boyd. 1900.
- The Essentials of Practical Bacteriology; An Elementary Laboratory Book for Students and Practitioners, by H. J. Curtis, B.S., M.D. London: Longmans, Green & Co. 1900. (9s.)
- The Microscopy of the more Commonly Occurring Starches, by Hugh Galt, M.B., C.M. Illustrated by 22 Original Microphotographs. London: Baillière, Tindall & Cox. 1900. (3s. 6d. net.)
- Gynæcological Operations, exclusive of those interfering with the Peritoneal Cavity, by Skene Keith, M.B., F.R.C.S. Ed. Illustrated with Forty-Four Figures. Edinburgh: Young J. Pentland. 1900.
- A Manual of Surgical Treatment, by W. Watson Cheyne, M.B., F.R.C.S., F.R.S., and F. F. Burghard, M.D. and M.S. Lond., F.R.C.S. In Six Parts. Part IV: The Treatment of the Surgical Affections of the Joints (including Excisions) and the Spine. London: Longmans, Green & Co. 1900. (14s.)
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**GLASGOW.—METEOROLOGICAL AND VITAL STATISTICS FOR  
THE FIVE WEEKS ENDING 24TH NOVEMBER, 1900.**

	WEEK ENDING				
	Oct. 27.	Nov. 3.	Nov. 10.	Nov. 17.	Nov. 24.
Mean temperature, . . .	46·8°	48·9°	46·7°	42·8°	36·6°
Mean range of temperature between day and night, .	13·2°	13·7°	10·3°	8·1°	11·8°
Number of days on which rain fell, . . . . .	4	3	6	6	3
Amount of rainfall, . ins.	0·47	1·10	2·74	1·36	0·46
Deaths registered, . . .	296	321	291	304	308
Death-rates, . . . . .	20·7	22·4	20·3	21·2	21·5
Zymotic death-rates, . .	2·7	3·1	2·4	2·8	2·5
Pulmonary death-rates, .	5·6	7·8	6·6	8·2	7·3
DEATHS—					
Under 1 year, . . . . .	93	96	92	74	89
60 years and upwards, .	41	47	48	53	50
DEATHS FROM—					
Small-pox, . . . . .	2	...	...	2	1
Measles, . . . . .	1	1	...	1	1
Scarlet fever, . . . . .	6	5	3	2	5
Diphtheria, . . . . .	1	2	3	5	2
Whooping-cough, . . .	12	15	16	17	17
Fever, . . . . .	3	8	4	6	3
Diarrhoea, . . . . .	14	14	9	7	7
Croup and laryngitis, .	...	4	2	...	2
Bronchitis, pneumonia, and pleurisy, . . . . .	73	94	77	92	86
CASES REPORTED—					
Small-pox, . . . . .	2	4	4	2	14
Diphtheria and membranous croup, . . . . .	12	13	14	21	16
Erysipelas, . . . . .	23	24	23	18	20
Scarlet fever, . . . . .	123	107	71	97	98
Typhus fever, . . . . .	...	1	2	1	10
Enteric fever, . . . . .	34	53	26	16	14
Continued fever, . . .	...	2	1	...	1
Puerperal fever, . . .	4	3	...	4	...
Measles,* . . . . .	23	74	29	46	17

\* Measles is not notifiable.

SANITARY DEPARTMENT,  
GLASGOW, 24th November, 1900.

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